



Military Illustrated Modeller

military illustrated  
**modeller**

**ISSUE**  
**155**

# military illustrated **modeller**

**FREE GIFT** 180 metres of masking tape  
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£6.95 - August '24 (issue 155)

**Aircraft edition**

Tamiya 1:48 F-14A Tomcat • Aviatic 1:32 Pfalz D.VIII • Eduard 1:4 Messerschmitt Bf 110 C  
Instrument panel • NSW Scale Model Show Report and more...

**READY FOR  
LAUNCH**

Hasegawa 1:48  
F1M2 Pete Model 11





We are pleased to introduce you the new Model Color, the range that sets the standard for all figure and model kits painting enthusiasts

The range consists of **220 references**, including 192 very opaque colors, 10 metallics, 2 transparent, and 16 auxiliary products, presented in the new 18 ml r-PET (recycled/recyclable) bottle, completely transparent and more sustainable. NO, it's not the same, it's better!

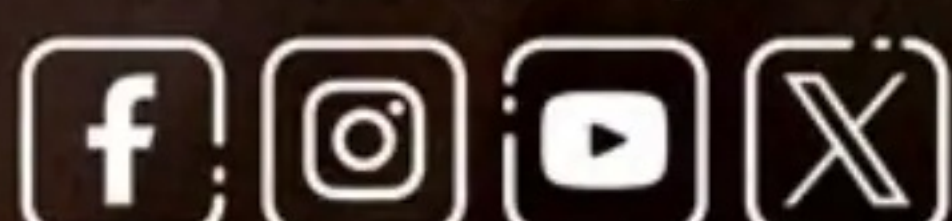
We have introduced a new formulation that will surprise you with its amazing brushability, excellent opacity and superb matt finish. You will notice that the colors dry quickly, forming a homogeneous and self-leveling layer that respects the smallest detail present in your model.

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# MODEL COLOR



# Vallejo V





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## A06023 BOEING CHINOOK HC.1

Airfix has sent images of box art, marking guide and other images of their latest all-new release:

## THE NEW TOOLED 1:72 BOEING CHINOOK HC.1 IS NOW AVAILABLE!

**R**anked at skill level 2, the new tool 1:72 scale Boeing Chinook HC.1 features the scheme of the most famous Chinook to have entered service, Bravo November. The kit also includes a Gulf War scheme during operation 'Granby' in 1991. Featuring stunning surface detail, this kit also allows for a poseable door/ramp, detailed interior, and cabin seats. This newly designed kit equates to 171 parts and once complete, the kit displays at 250mm in rotor diameter and 356mm in length.

An aircraft which possibly underlines the capabilities of the modern helicopter more effectively than any other type, the mighty Boeing CH-47 Chinook has already been in military service for over sixty years and shows no sign of disappearing from world skies any time soon.

The distinctive tandem twin-rotor configuration of this heavy-lift helicopter cleverly counteracts the effects of engine torque by having each of its huge rotor blade stacks rotate in opposite directions, thus negating the need for the tail rotors traditionally associated with helicopters.

The impressive Chinook made its first flight in 1961 and since then, it has become one of the most effective aircraft designs of the post-war era, capable of operating in almost any environment, no matter how inhospitable the terrain. Clearly, this has made the Chinook invaluable when performing many roles, ably tackling a multitude of military and civilian applications.

As the world's largest operator of the Chinook outside the US, the Royal Air Force ordered 33 of these heavy-lift behemoths in 1978, with No.18 Squadron taking the honour of becoming Britain's first operational Chinook unit in August 1981.

### KEY DETAILS INCLUDE:

- Poseable rear door/ramp.
- Detailed interior including all cabin seating.
- Accurate representation of quilted surfaces in cockpit.
- Winches and underside hook option.
- Conical and EAPS intake filter option.

### MARKINGS

- Scheme A: Boeing Chinook HC.1, "Bravo November", No. 18 Squadron Royal Air Force, "Operation Corporate", Falkland Islands, South Atlantic, May - June 1982.
- Scheme B: Boeing Chinook HC.1, No. 7 Squadron, Operation 'Granby'/Desert Storm, Gulf region, May 1991.

We will have more details in the coming weeks.



Thanks to Airfix for the information and images [www.airfix.com](http://www.airfix.com)



**NEW  
MOULD****1:35**

# AUSTIN K2/Y AMBULANCE



**AUSTIN K2/Y AMBULANCE**  
30 Corps, Motor Ambulance Convoy, Royal Army Service Corps,  
North West Europe, 1944.



**AUSTIN K2/Y AMBULANCE**  
British Army, North Africa, 1940.



**AUSTIN K2/Y AMBULANCE**  
British Army, Alexandria, Egypt, 1942.



**AUSTIN K2/Y AMBULANCE**  
Auxiliary Territorial Service, England, 1944.

Length 178mm Width 68mm Pieces 146

## A1375 AUSTIN K2/Y AMBULANCE

One of the most famous vehicles of its type, the Austin K2/Y Ambulance was used extensively by British and Commonwealth forces throughout WWII, both in the combat zones of the world and on the home front. Built around the chassis of the Austin K30 light truck, the casualty compartment was developed in conjunction with the Royal Army Medical Corps and therefore proved to be highly functional. Able to carry either four stretcher cases or ten seated casualties, one of the main reasons why the K2/Y was so successful was because it was so rugged and reliable, requiring only a minimum of maintenance - an ambulance should always be ready when you need it.

The rear cabin was typically constructed of painted canvas on a timber frame, with the highly visible red cross on a white disk positioned prominently on all sides to hopefully ensure the vehicles occupants didn't come under fire.



**1:35 AUSTIN K2/Y AMBULANCE**

### Special Features Include:

- PHOTO-ETCHED PARTS
- INTERIOR DETAIL



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and all good retail stockists

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Start as you mean to finish

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Official Product



# AMERICAN STAR

## PART ONE ASSEMBLING THE FUSELAGE

Mark Casiglia adds detail to  
Tamiya's gorgeous 1:48 scale  
F-14A Tomcat







**T**amiya released their beautiful 1:48 Grumman F-14A Tomcat kit in 2016, followed with a few new parts in 2018 with their F-14D, and finally with more new parts in 2021 with the subject of my project, their F-14A Tomcat (Late Model) Carrier Launch Set. This variant contains a ground crew figure signalling an aircraft attached by its kneeling nose landing gear to a carrier deck catapult shuttle, and a cardboard print to pose the aircraft onto. There is little flexibility in the model to display it any other way than in this take off stance. Although the nose landing gear can be modelled at full height with no attached shuttle, the wings can only be placed extended with flaps down and leading edge slats out. Exhausts can be posed any which way, but the canopy can only be placed closed. I didn't quite realise some of this

at the start of the build, which caused me to change tack through the process with regards to placement of pilots. More on that later.

### AFTER MARKET

As I usually do, I purchased some aftermarket items for this kit before commencing, and that came down to what was in stock more than anything else. In the end, I chose not to use some of what I had purchased as I thought it wasn't really necessary, such as a resin chin pod and coloured plastic navigation lights from Quickboost. I also purchased a resin exhaust nozzle by Reskit, but one nozzle was defective and unusable. The aftermarket items which made the cut included an Eduard Big Ed photo-etch detail set BG49169, Wheeliant resin wheels set 148014 by Aires, Eduard F-14 Stencils set D48099 and finally Furball

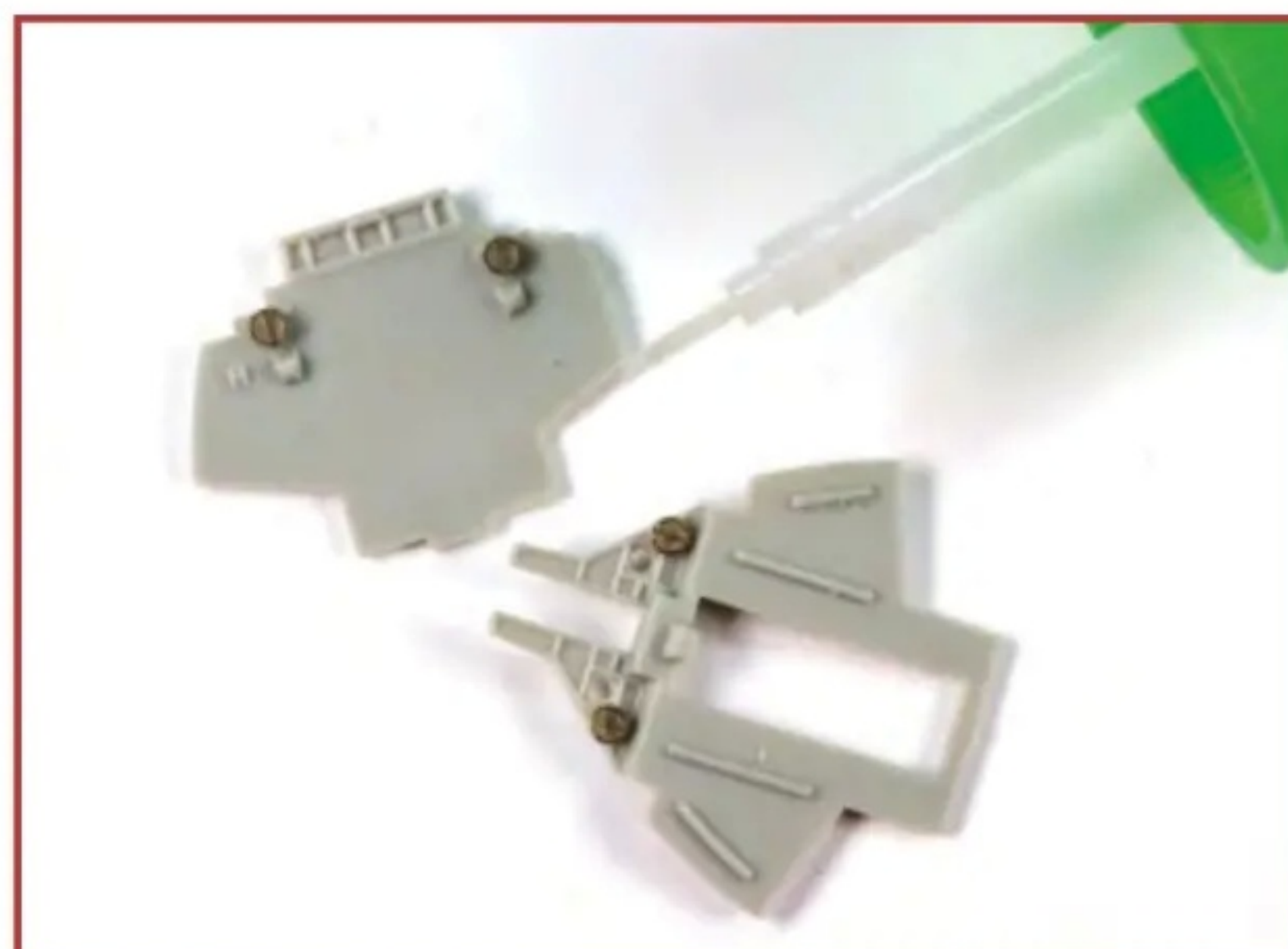
Aero-Design Colors and Markings of US Navy Tomcat Part XII, item F/D&S-4825. I chose VF-33 "Starfighters", USS America 1991, from a possible ten options provided in the one decal set.

The Big Ed set came with mask set EX540, steel coloured seatbelts set 49806, interior detail set 49805, engines detail set 48910 and exterior detail set 48909. The masks were useful and very accurate. The coloured seatbelts were acceptable if not toy-like in appearance, the interior detail was good but verging on obsolete, the engine detail looked good but remained unused and I used about half of the exterior detail where I thought it may offer an enhancement. Some photo-etch just seems to be there for no good reason other than to provide an alternative option. ➤

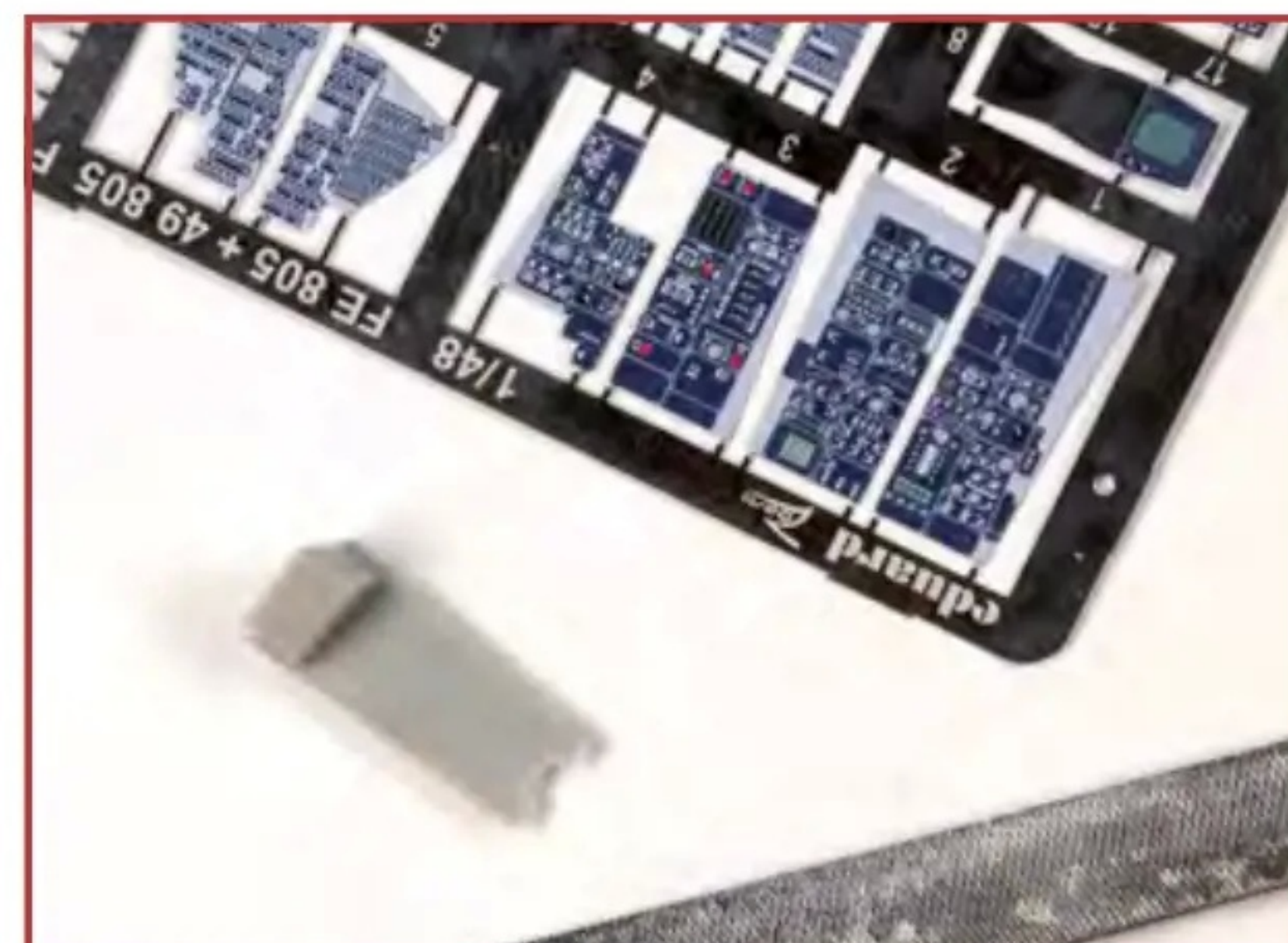




Eduard 49805 F-14A interior photo-etch set



Tamiya Extra Thin is great for melting small pieces of photo-etch into place

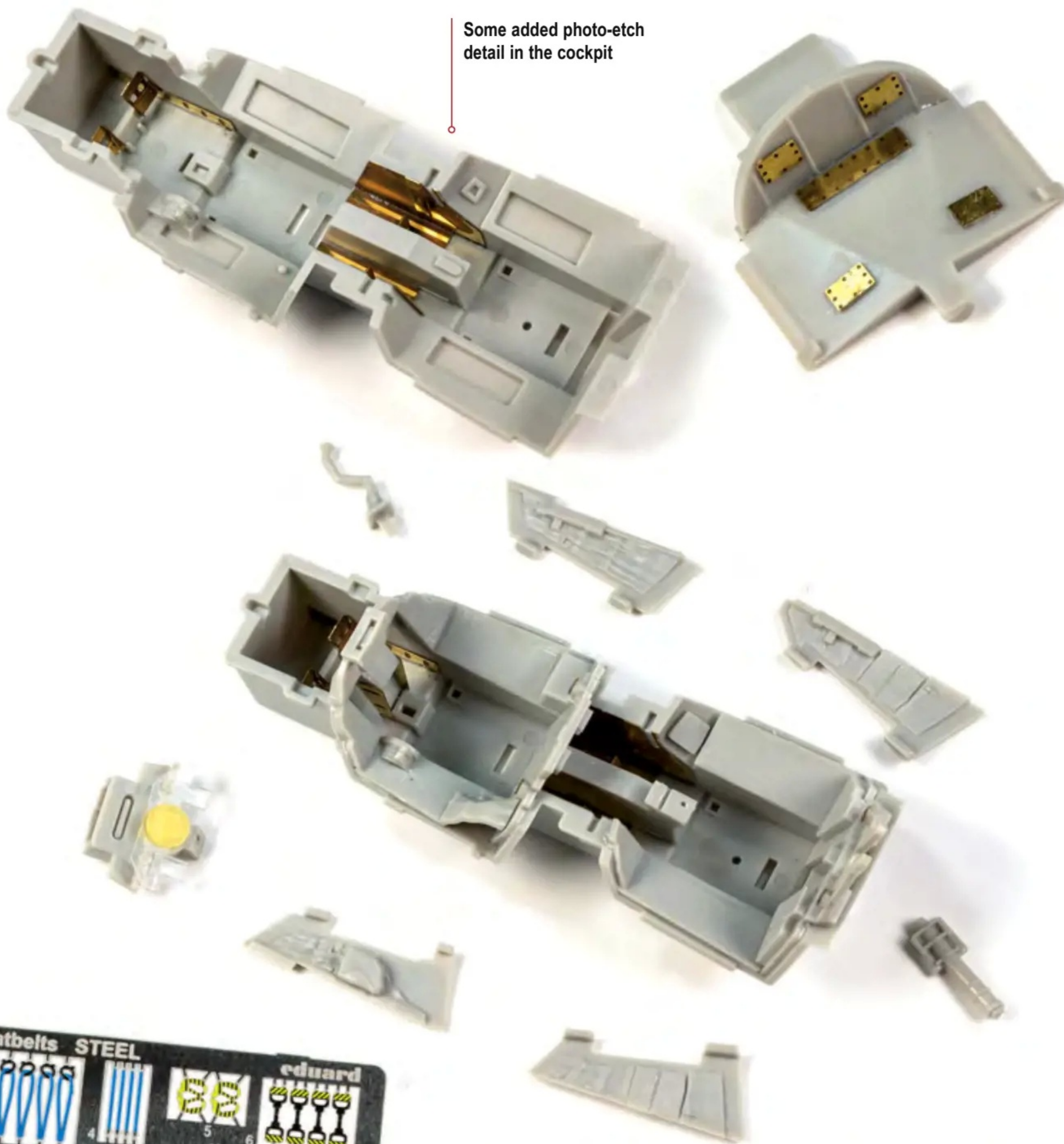


Filing off the moulded detail to make way for the coloured PE

## ◀ COCKPIT

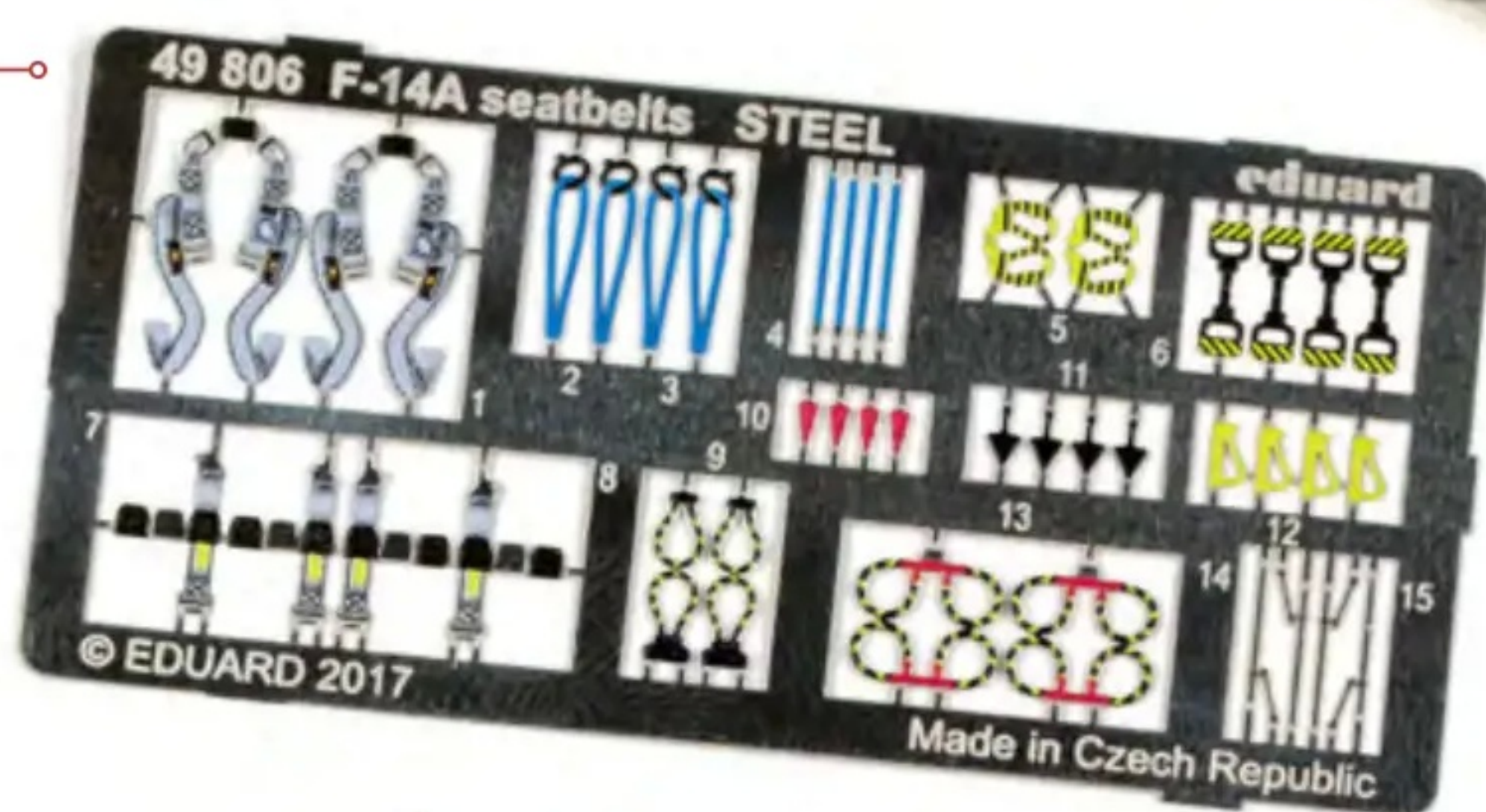
The cockpit has some beautifully detailed mouldings and if I had my time again, I would have bypassed the Eduard coloured photo-etch detail and simply painted the kit parts. Firstly, in a world of 3D printed cockpit decals, coloured photo-etch now looks pedestrian. Secondly, with pilots in place and canopy closed, all that detail is mostly lost. Thirdly, any time extras are added there is an opportunity to interfere with the otherwise perfect parts fit you can expect from Tamiya. I now know what not to do in future, but as it was I proceeded to file away moulded detail from panels in preparation for fitting the coloured photo-etch panels into place.

The cockpit components were painted with Mr Finishing Surfacer (MFS) 1500 Black and Tamiya XF-19 Sky Grey acrylic, followed by brush touching various other Tamiya acrylics mixed with a touch of Tamiya acrylic paint retarder. Surfaces were then lightly weathered with Mr Weathering Color (MWC) in Multi Black, Multi Grey and Greyish Brown, with odourless solvent used to both dilute, disperse or remove the washes as required. All surfaces were then sealed Mr Hobby GX114 Flat Super Smooth Clear. The primer, paint and clear coats were thinned with Mr Levelling Thinner (MLT). The coloured photo-etch panels were finally bonded with VMS Flexi 5K CA which is slightly slow drying to allow perfect positioning. Despite all the drawbacks mentioned regarding the photo-etch panels, the finished result looked quite good. ➤



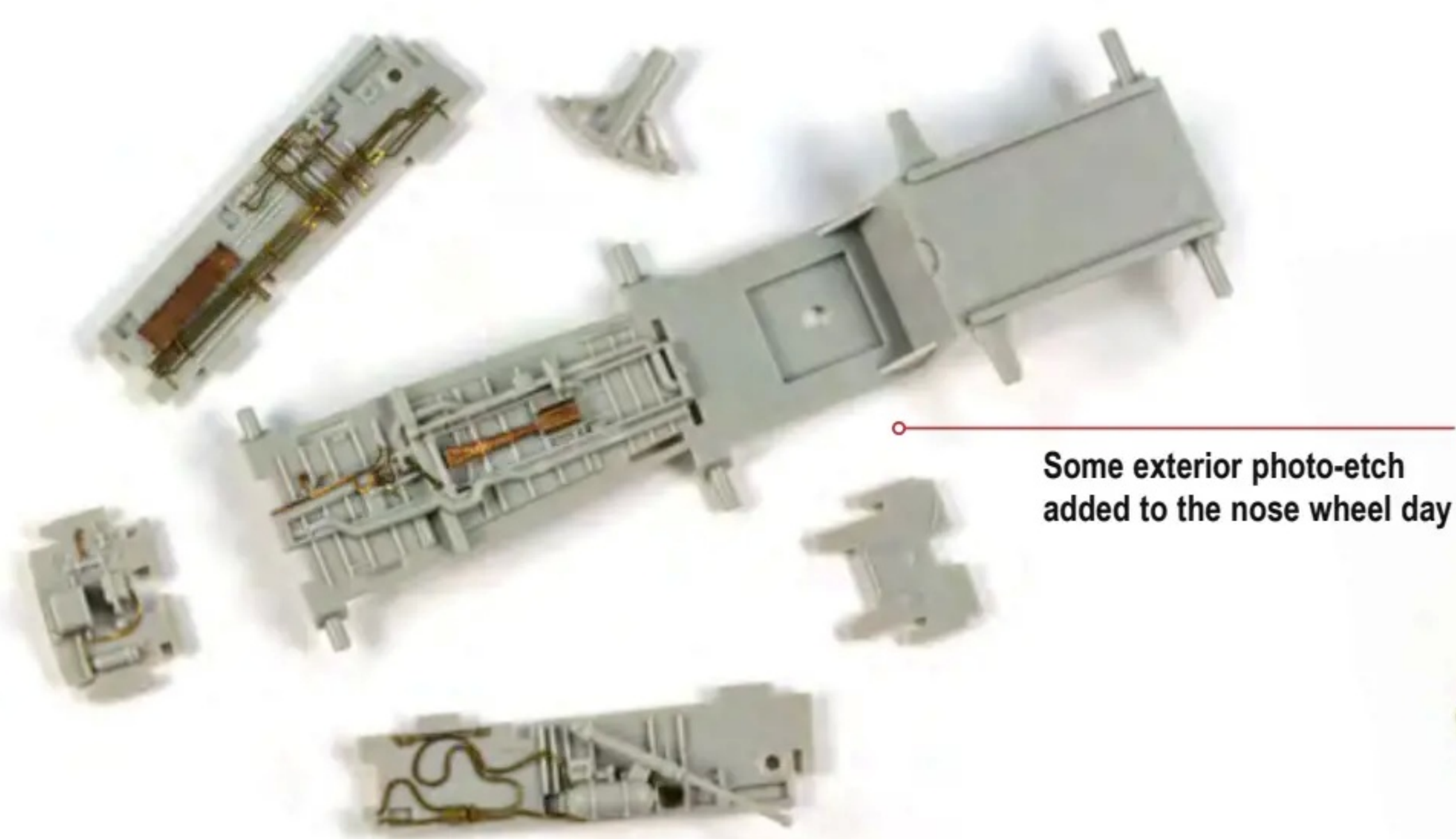
Some added photo-etch detail in the cockpit

Some partially assembled kit ejector seat components with Eduard 49806 F-14A Seatbelts coloured photo-etch set

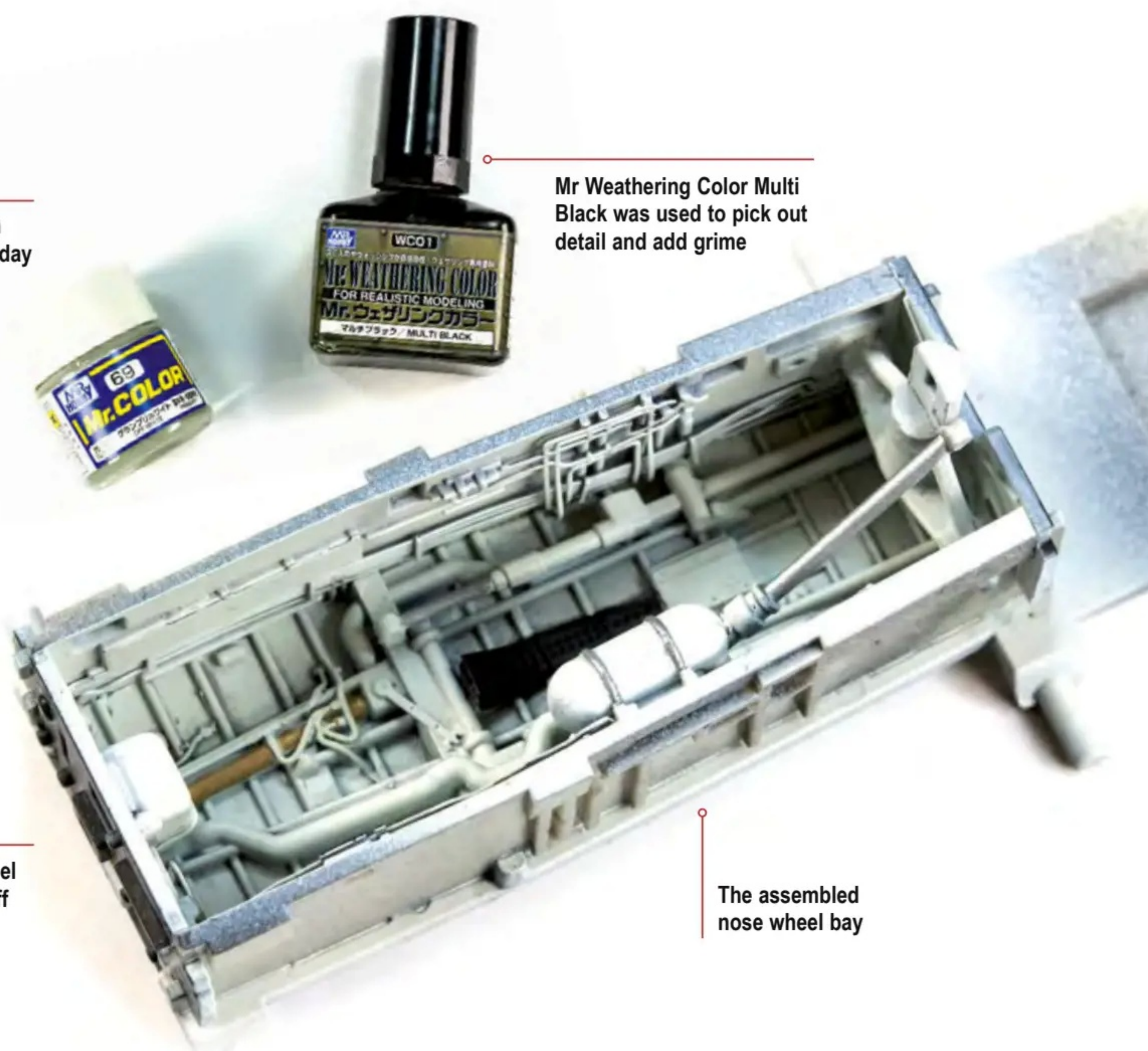


Eduard 48909 F-14A exterior photo-etch detail set





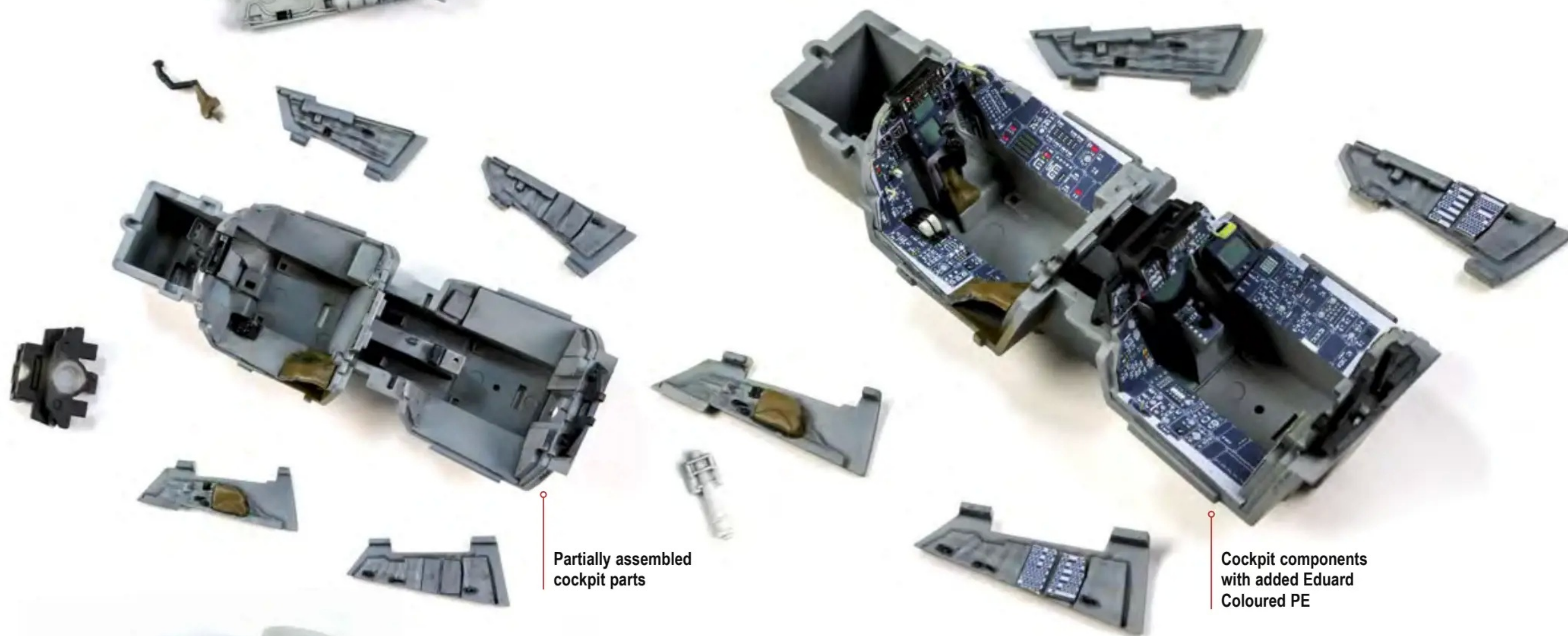
Some exterior photo-etch added to the nose wheel bay



Mr Weathering Color Multi Black was used to pick out detail and add grime

Initial painting of the wheel well with Mr Color C69 Off White and detail colours

The assembled nose wheel bay



Partially assembled cockpit parts

Cockpit components with added Eduard Coloured PE



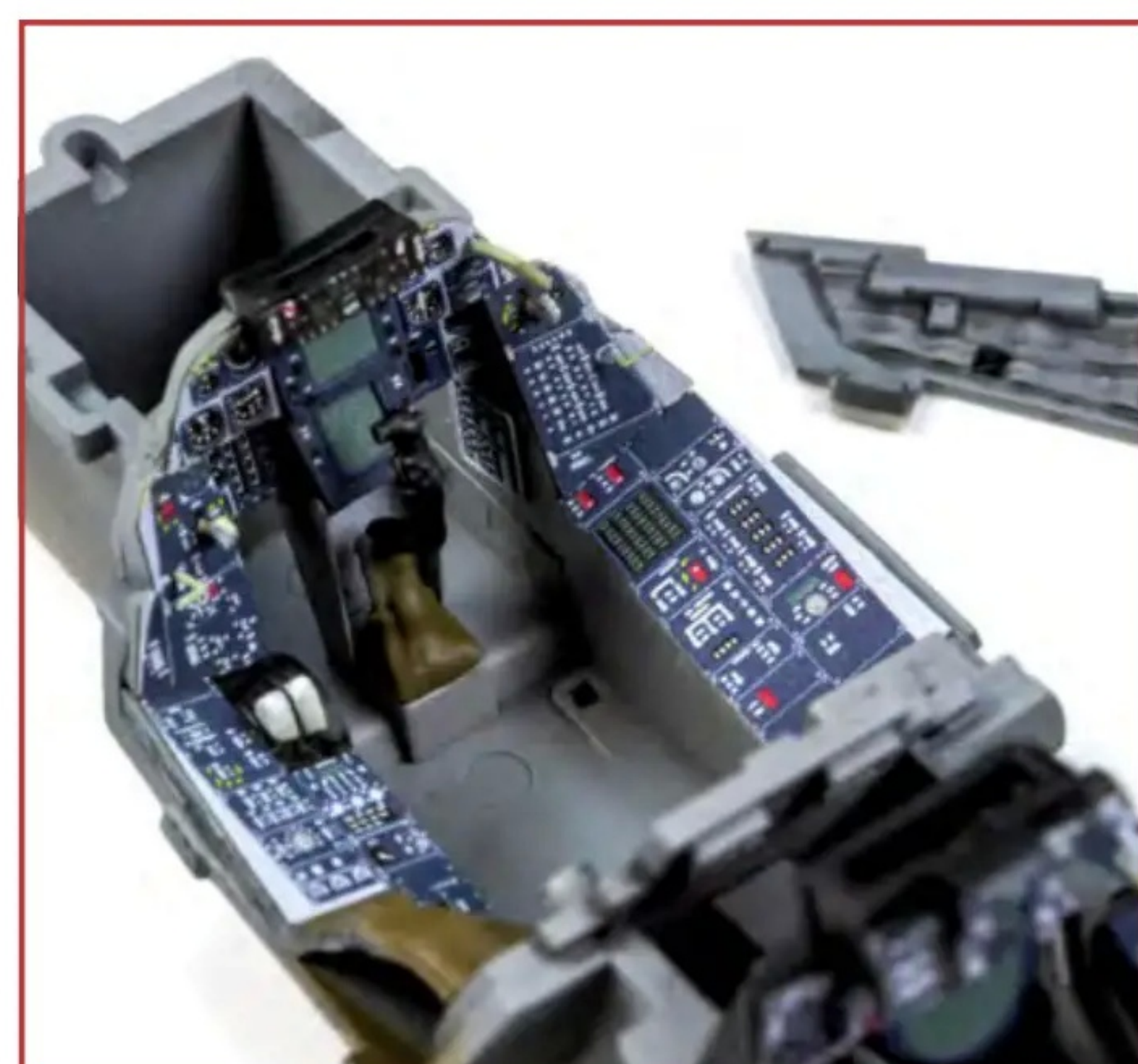
The main cockpit colour was Tamiya XF-19 Sky Grey, sealed with GX114 Flat Clear



Various shades of Mr Weathering Colour were used in the cockpit



Close up detail showing the Eduard coloured photo-etch in position

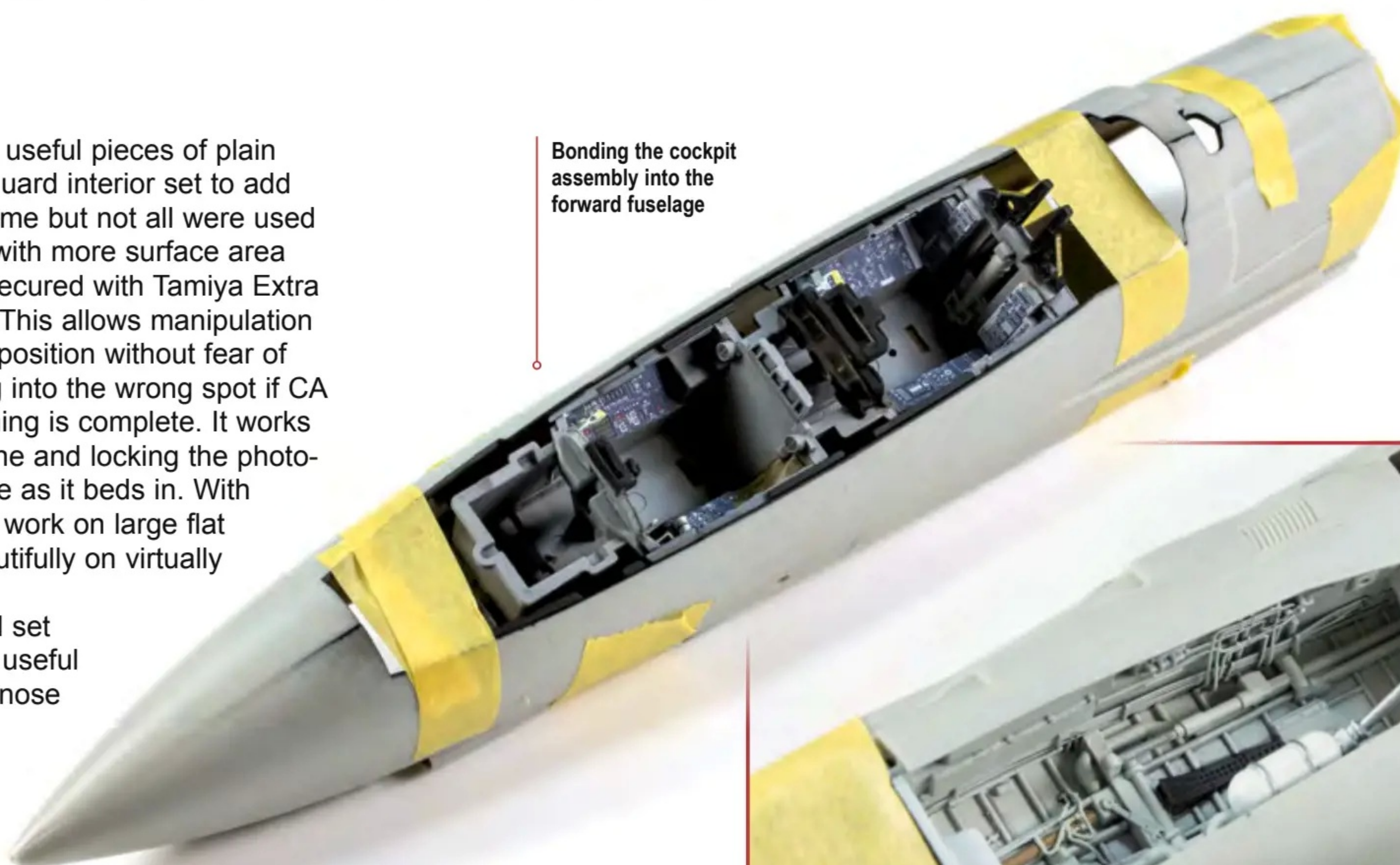




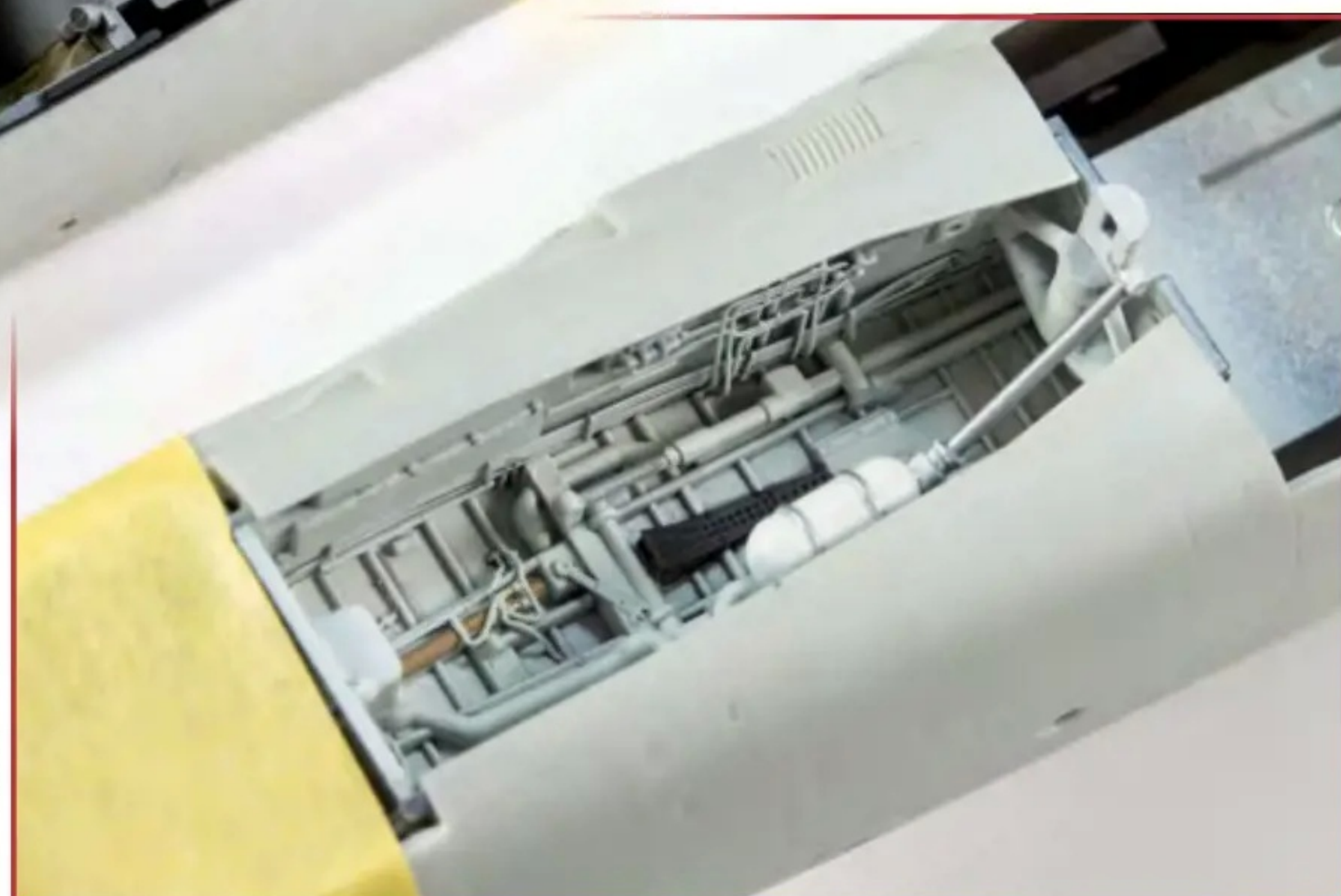
There were some useful pieces of plain photo-etch in the Eduard interior set to add or replace detail. Some but not all were used and smaller pieces with more surface area can be very easily secured with Tamiya Extra Thin (TET) cement. This allows manipulation of fiddly pieces into position without fear of accidentally bonding into the wrong spot if CA dries before positioning is complete. It works by melting the styrene and locking the photo-etch onto the surface as it beds in. With this in mind, it won't work on large flat parts but works beautifully on virtually everything else.

The exterior detail set provided some very useful added detail for the nose landing gear bay. Once in place, the parts were primed with MFS 1500 Black, painted with Mr Color C69 Off White with details picked out in brush painted Tamiya acrylics. A wash was applied and grime added with MWC Multi Black before final flat coating with GX114.

Bonding the cockpit assembly into the forward fuselage



The nose wheel bay attached to the underside of the cockpit assembly and bonded into the fuselage



## EJECTION SEATS

Meanwhile, I jumped ahead in the instructions and began working on the ejector seats. The Eduard coloured photo-etch seatbelts set also comes with other detail for the seats, including the yellow and black striped ejector handles. At this early stage I started assembling the seats with a view to no pilots, using all the kit parts and only adding the photo-etch seatbelts themselves. After following the paint instructions, adding washes and sealing, I added the seatbelts with CA and considered the seats done. On closer inspection I then thought the kit's ejector handles were simply too thick and out of scale. The hand painted yellow and black stripes were acceptable but not perfect either. I wanted to avoid the photo-etch versions as they are folded-over, flat parts with very little 3D appeal. However, on second thoughts this was probably the lesser of the evils, so I clipped off kit parts and replaced them with coloured photo-etch for a marked improvement. I thought this was the end of the story but there was to be change later in the process.

While work was being done on the ejector seats, the cockpit and nose landing gear bay were glued together and placed into the nose fuselage section. The fit was perfect and Tamiya tape was used to secure the nose section halves while TET was run along the seams to fuse the joints. Internally, Revell Contacta glue was used to secure the cockpit and gear bay assemblies together and to the fuselage interior. Once cured, seams were sanded flush and smoothed while the cockpit frame was being prepared. It was painted with XF-85 Rubber Black and prepared by dry brushing with XF-20 Medium Grey, sealing with GX114 and adding chips and scuffs with Tamiya X-11 Chrome Silver enamel. This was then bonded into place with Revell Contacta and the ejector seats were tried in to verify the final arrangement of cockpit parts. Everything was looking good to this point so I proceeded on with the main fuselage.

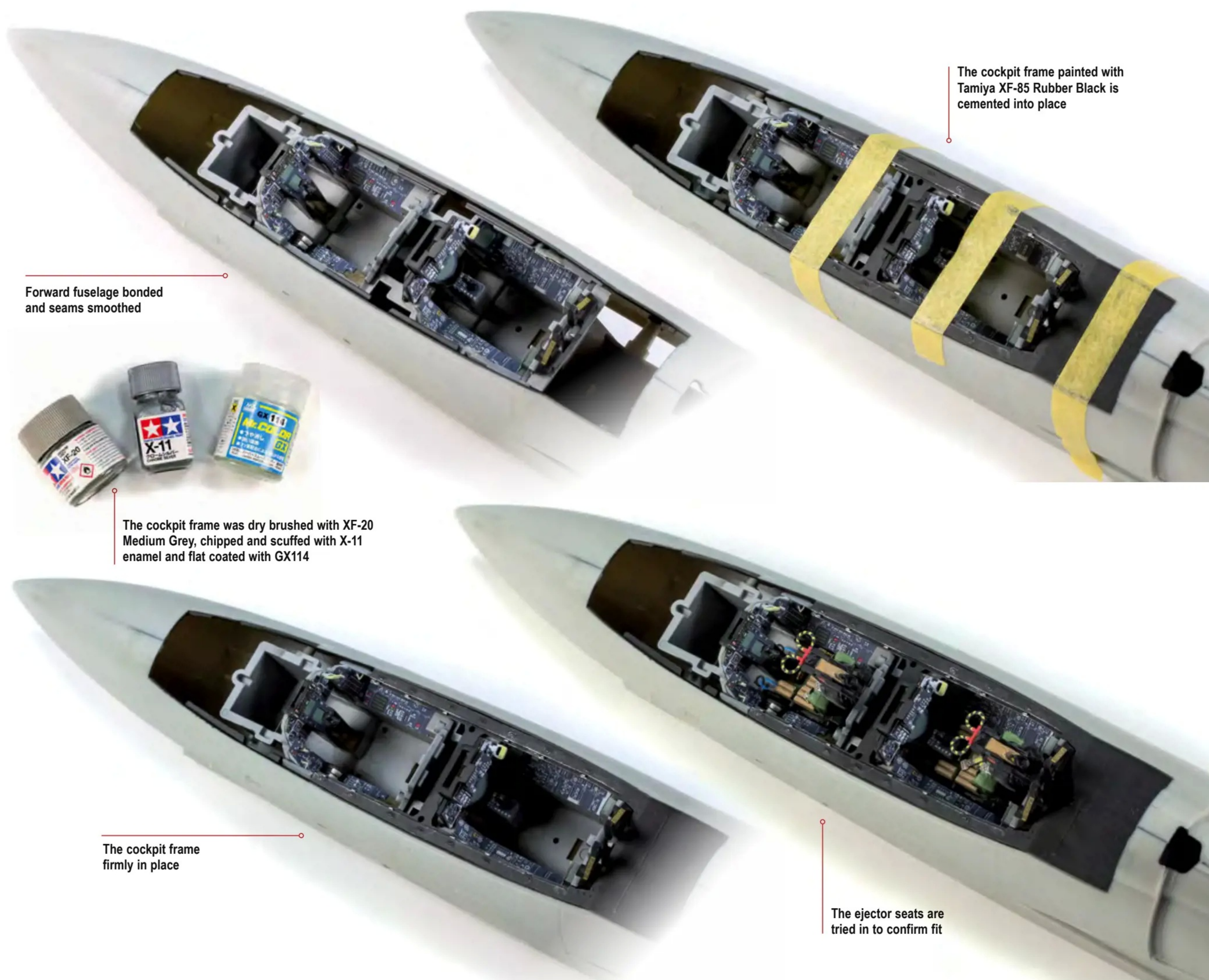


Initially the ejector seats were assembled and painted fully from kit parts with only Eduard coloured photo-etch seatbelts added. Unsatisfied with the yellow and black grab handles, the Eduard equivalents were installed and the difference before (left) and after (right) are obvious

Both seats now fully fitted with Eduard coloured photo-etch detail







Forward fuselage bonded and seams smoothed

The cockpit frame painted with Tamiya XF-85 Rubber Black is cemented into place

The cockpit frame was dry brushed with XF-20 Medium Grey, chipped and scuffed with X-11 enamel and flat coated with GX114

The cockpit frame firmly in place

The ejector seats are tried in to confirm fit

***"I PURCHASED SOME AFTERMARKET ITEMS FOR THIS KIT BEFORE COMMENCING, AND THAT CAME DOWN TO WHAT WAS IN STOCK MORE THAN ANYTHING ELSE..."***

### NON-NEGOTIABLE ASSEMBLY

The first non-negotiable with this kit is obvious at the next step, where the wing spar is a solid moulded piece set to the extended wings position. Screws and washers are provided to securely attach this spar in four points to the upper fuselage. Two of the moulded pillars which receive the screws unfortunately cause subtle sink marks in the styrene of the opposite surface and once spotted these were easily filled with MFS 500 grey and sanded smooth. Various internal areas in the upper and lower fuselage parts needed pre-painting and these were done with the same methods and white colour as the nose gear bay. This stage called for careful following of instructions to drill holes in the lower fuselage at various sizes and positions to correspond to the ordnance required for the chosen variant. With the side walls of the main landing gear bays glued into place, the upper and lower fuselage

sections were cemented together. Revell Contacta was used for the internal mating surfaces and TET was best for the more accessible areas around external seams. Soft padded clothes pegs, wooden craft pegs and Tamiya tape were used to keep parts together without excessive pressure as the glues cured.

On the side, work was being done on the insides of the exhausts and intake ramps and interiors, which were constructed and painted as per other internal white areas so far, with the exception that there is a delineation within the intake interiors between white and the external grey of the aircraft. Tamiya provides a masking sheet to cut out shapes for this area along with the usual canopy masks. This was obviously very helpful and allowed a correctly positioned and clean demarcation to be produced. I added some Soot from Tamiya Weathering Master (TWM) Set B to add a little grime to the interior areas which would

be hard to reach later in the build. The intake assemblies were then united with the main fuselage with the usual reassuring Tamiya precision fit.

The nose fuselage section was then attached to the main fuselage, with the addition of a panel behind the nose gear bay. Holes were drilled to accept the Phoenix pallets to come. Meanwhile the appropriate beaver tail for my variant was selected and placed, along with the two ventral fins that sit under the engines. While in construction mode I jumped ahead and put the wings, flaps, tails and horizontal stabilisers together. Modern Tamiya kit just make you want to keep building. For example on the tail sections, part numbers are moulded into their interiors to absolutely prevent a mix-up when bonding sections together. This is extremely thoughtful kit planning and brings a level of joy to the building experience. ➤

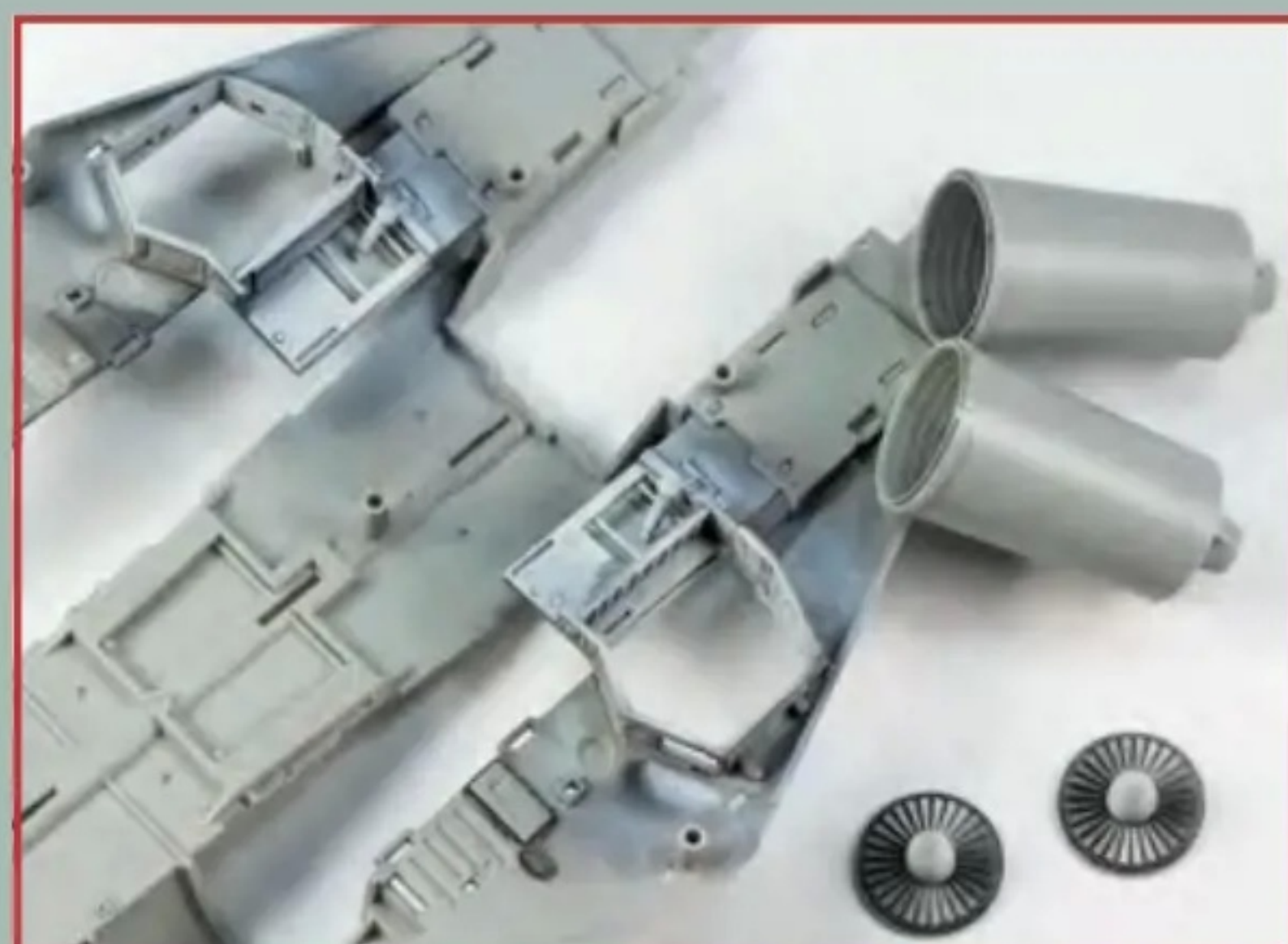




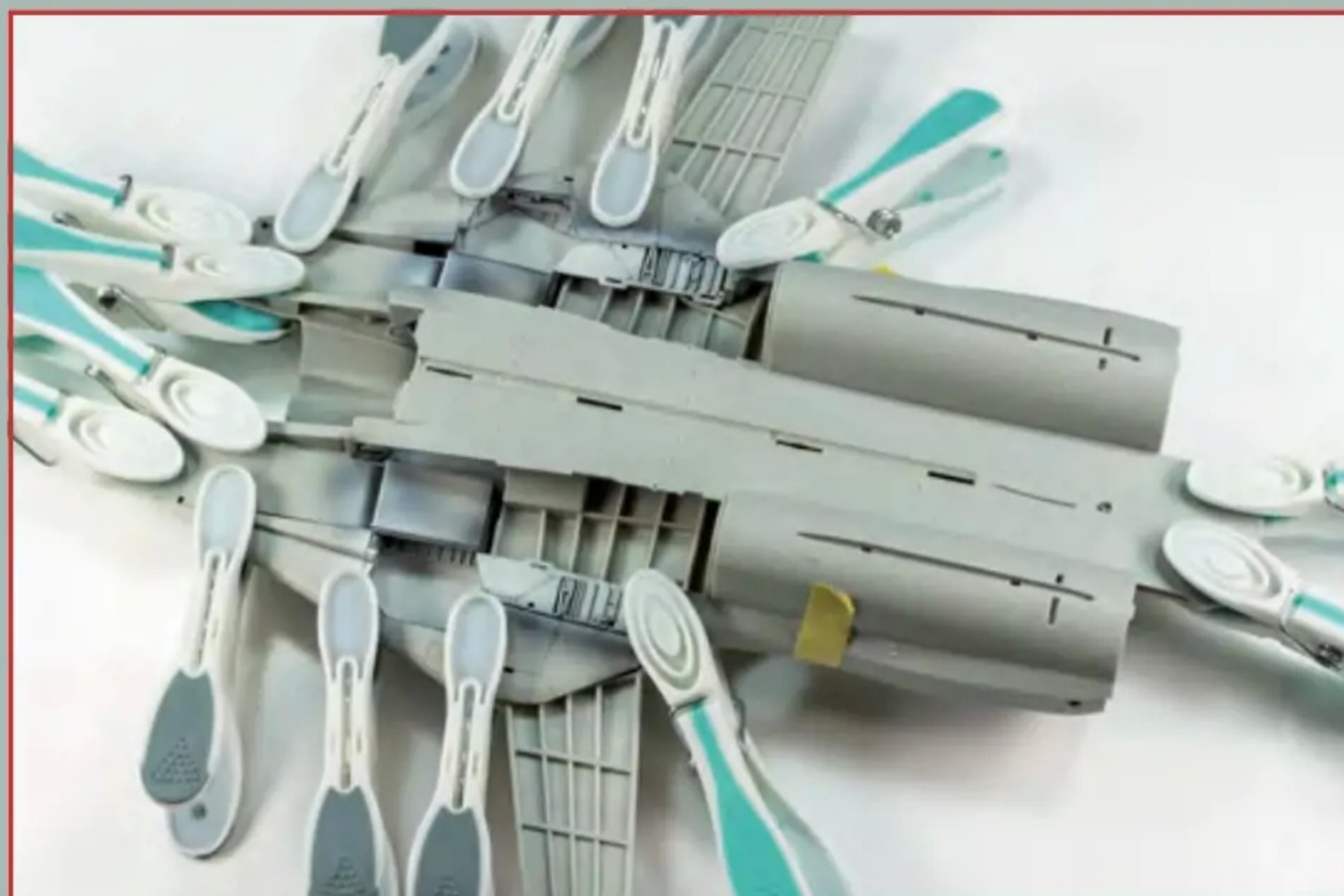
The wing spar is secured with 4 screws for a completely unambiguous and secure fit



Upper and lower main fuselage with some interior sections painted in C69 Off White



The main landing gear bays are assembled and other components are painted ready for fitting



The upper and lower fuselage sections are bonded together with rubber-tipped clothes pegs providing a positive medium force while cements cure



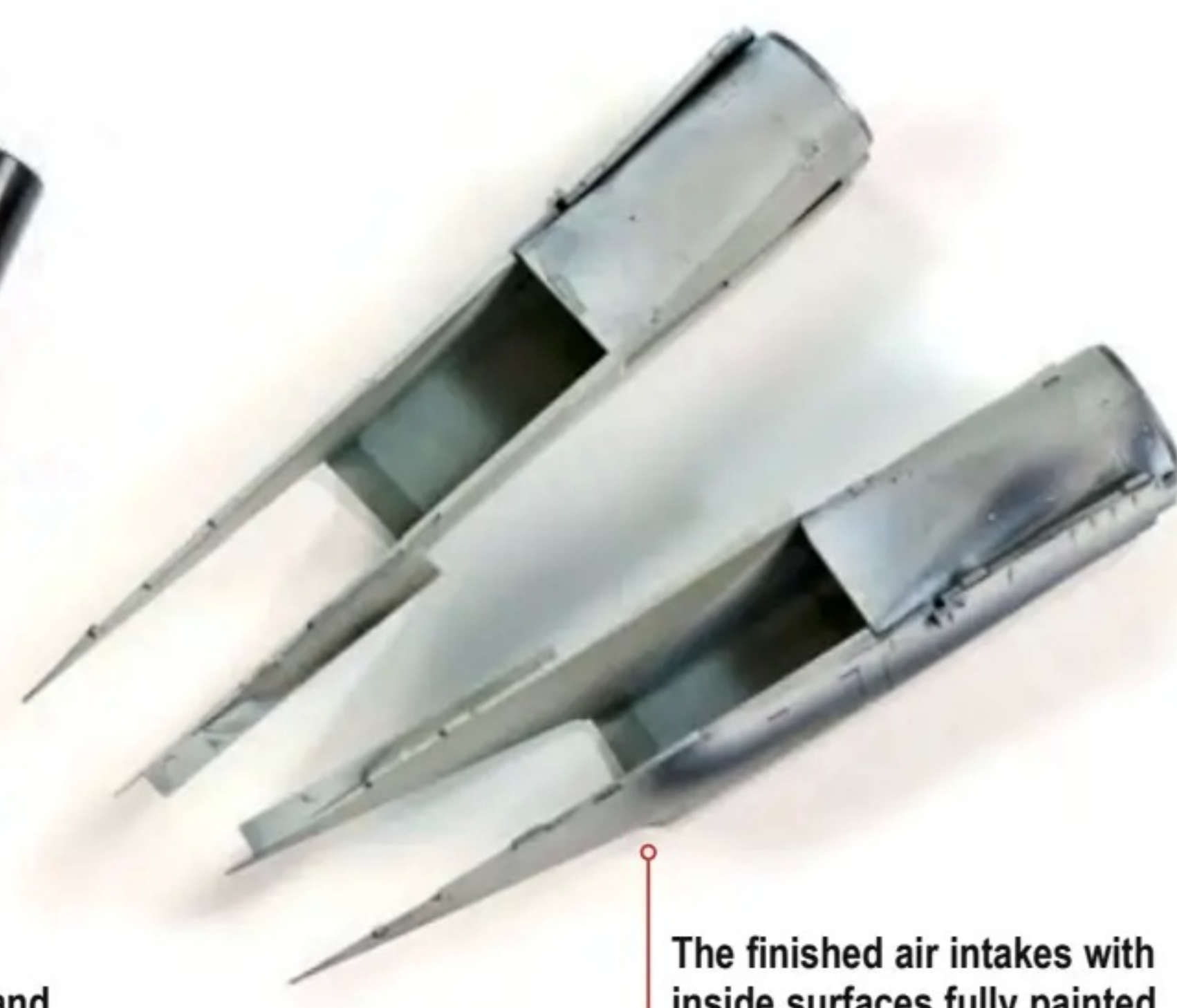
Some tape was also used to ensure solid contact while adhesives hardened



The air intakes with white areas masked with included masking shapes and some sponge



The products used for painting and weathering inside the air intakes



The finished air intakes with inside surfaces fully painted and weathered



Ready to join the air intakes to the fuselage



Air intakes securely in place





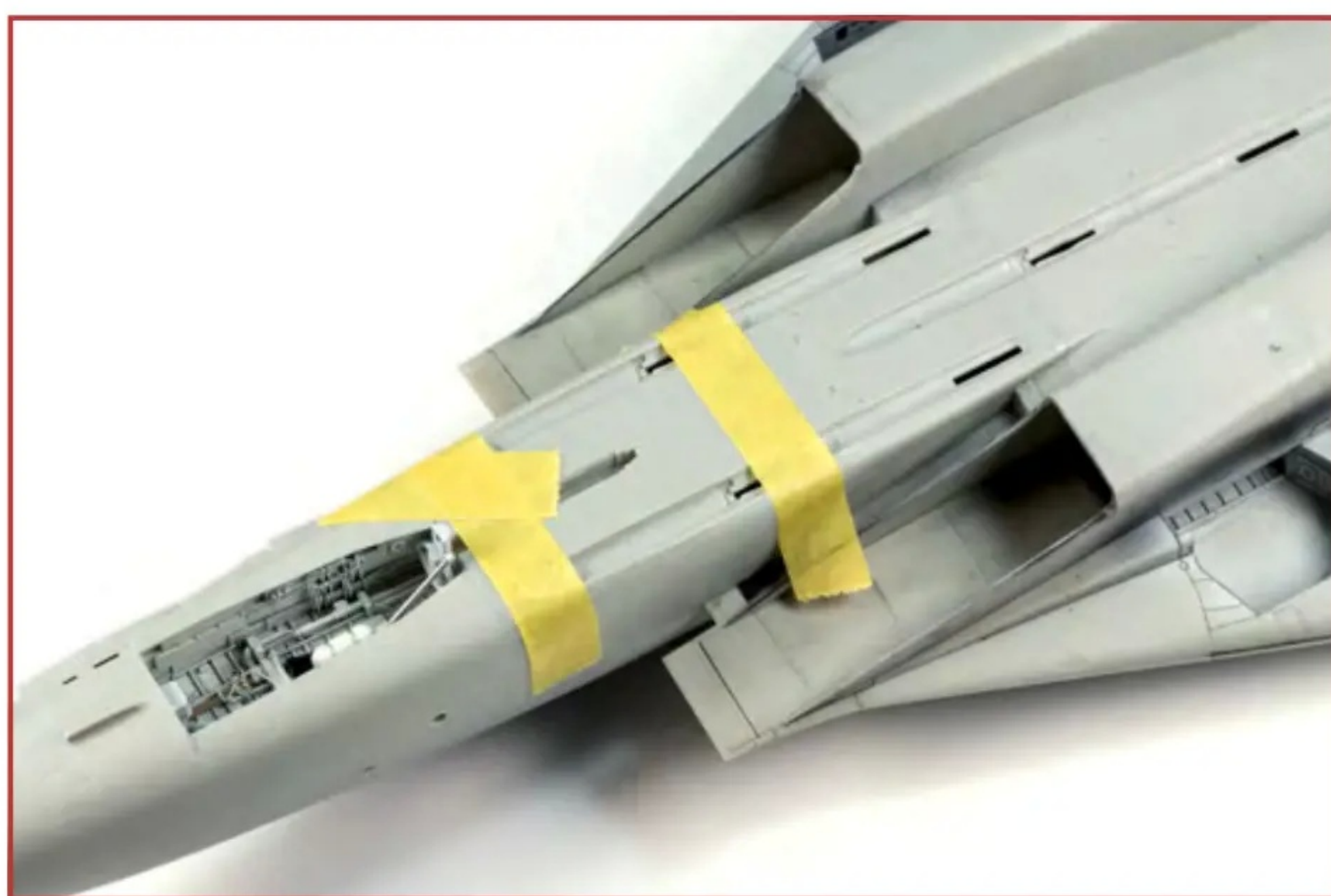
Two sink marks, opposite tick pillars of plastic which receive screws on the opposite side, are filled with Mr Surfacer 500 and sanded smooth



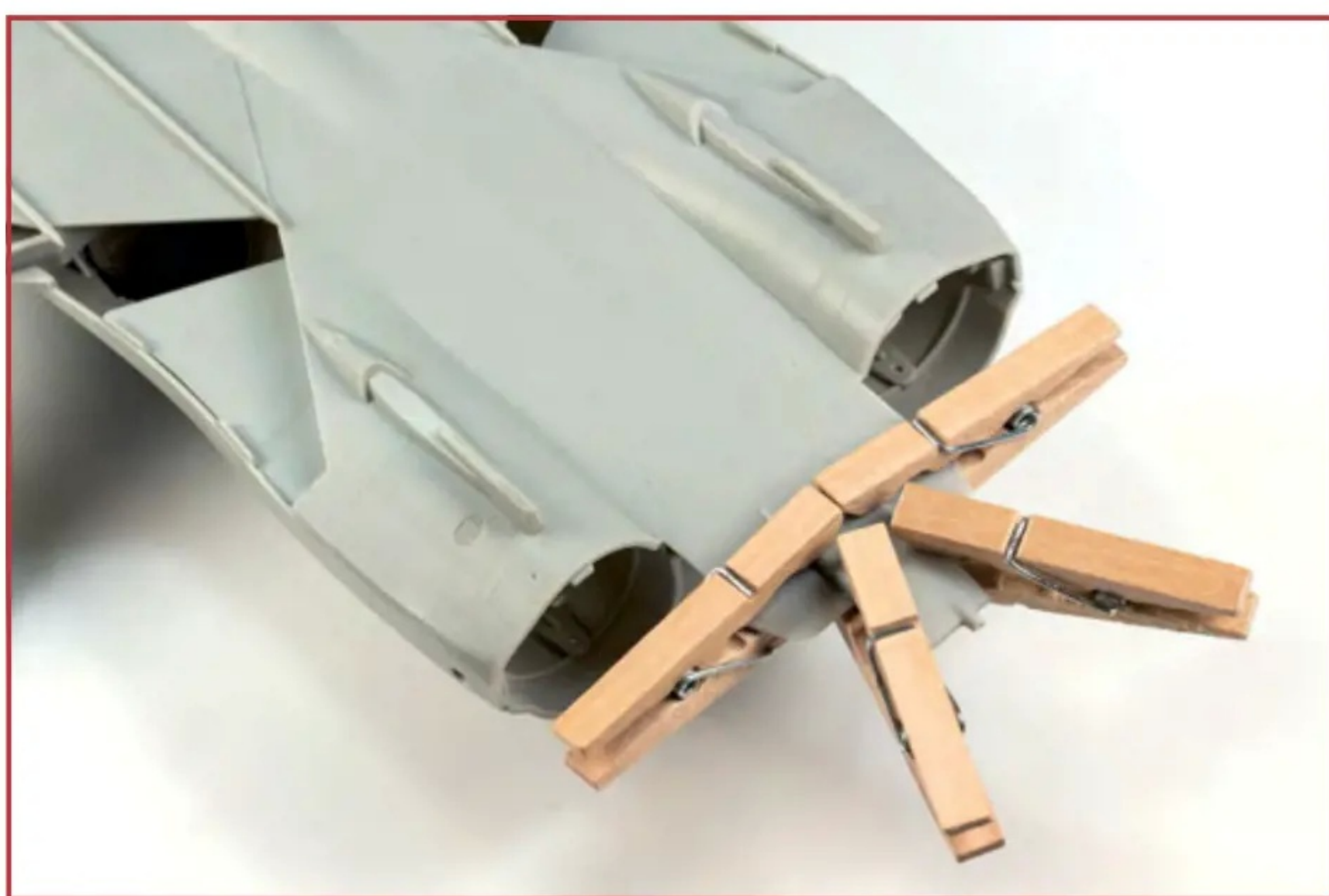
The nose section is now bonded to the main fuselage



An underside panel ready to place



The panel is taped into position as Tamiya Extra Thin cures



Wooden craft pegs make excellent low-force clamps while glues set

## ← DECISIONS DECISIONS...

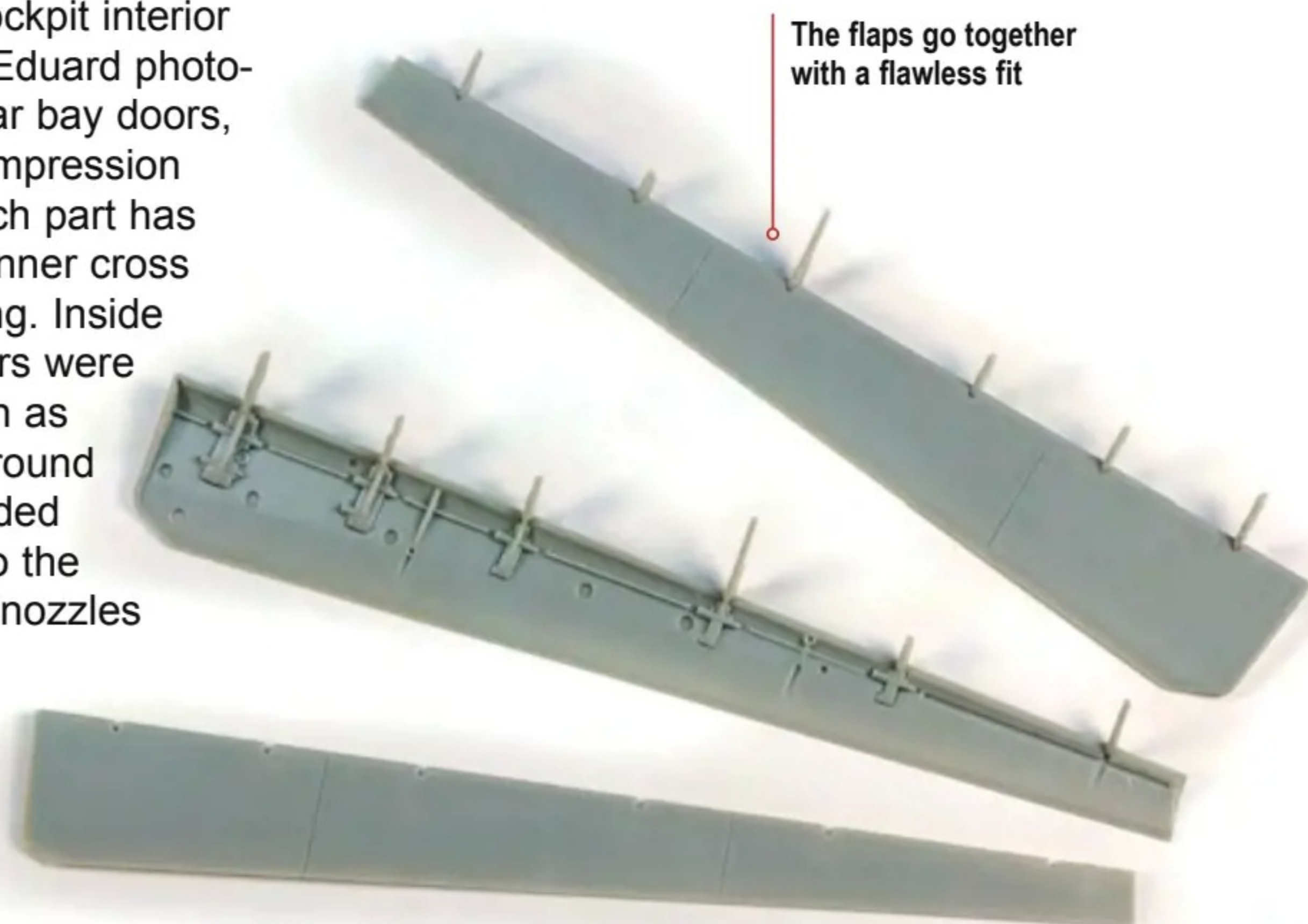
From the start of the project my plan was to pose the aircraft parked and without pilots. In concept, a good idea but in reality, with the wings extended, flaps down and leading edge slats out, there was only one possibility for this model, and that was to build as the kit intended, with nose gear lowered and fitted to a catapult shuttle, exhaust nozzles open and pilots in their seats. No problem with the first two, but the pilot issue would mean some readjusting of the already-completed ejector seats and worse, having to build the two pilot figures, which is probably my least preferred aspect of scale modelling. I like to build machines and I feel that figures, unless executed to a very high standard, always seem to break the illusion of reality. Either way, I had no choice and I had the comfort of knowing the closed canopy would reduce the focus on the figures themselves. So with that, I assembled and painted the pilots according to instructions, removed the Eduard seatbelts, trimmed and posed them over the pilot's shoulders and painted a filter colour over them to improve upon the moulded detail that was provided. After carefully trial fitting them into the cockpit with hands on the relevant controls, they were firmly glued into position using CA. Ultimately, the result wasn't too bad.

On trial-fitting the pilots against the canopy, I noticed a mould seam running down the midline from front to back which needed to be removed. On the inside of the canopy

I realised too late that what appeared to be a large seam was actually a couple of moulded static discharge bands, but these were easily repaired later. The mould seams were removed with an SMS ceramic scraper followed by GodHand sponges through the full range of grits to 10,000. Finally all three grades of Tamiya polishing compounds were used to finish the result. On the inside, a rotary abrasive rubber bullet was used, followed by Tamiya and Infini sanding sponges and again finished with compounds.

Meanwhile I decided to press ahead with construction of the ordnance and fuel tanks, as well as the chin pod, final cockpit interior items and landing gear. Some Eduard photo-etch was useful in the nose gear bay doors, as the kit provides a moulded impression of a vent whereas the photo-etch part has an actual vent opening. The thinner cross section was also more appealing. Inside surfaces of some gear bay doors were also dressed up with photo-etch as were a couple of other areas around the airframe. At this point I bonded the external exhaust sections to the rear of the fuselage, minus the nozzles which would need some careful interior paintwork. Care was taken at this step because the outside join between the exhaust and body did not represent a joint in the actual aircraft, so the seam was made

to disappear with Ammo Black CA sanded and smoothed flush. Meanwhile the inside of the exhausts was painted in the same white as other areas while the interior surfaces of the nozzles were carefully masked with narrow tape to produce tapering stripes which were painted using LP-27 German Gray. These internal exhaust areas were airbrushed with Liquitex acrylic ink in black, thinned with Tamiya X-20A. This added a nice even layer of grime which accumulated on the internal ridges for a convincing effect. The exhausts, minus the nozzles, were then cemented into the back of the airframe. ➤



The flaps go together with a flawless fit



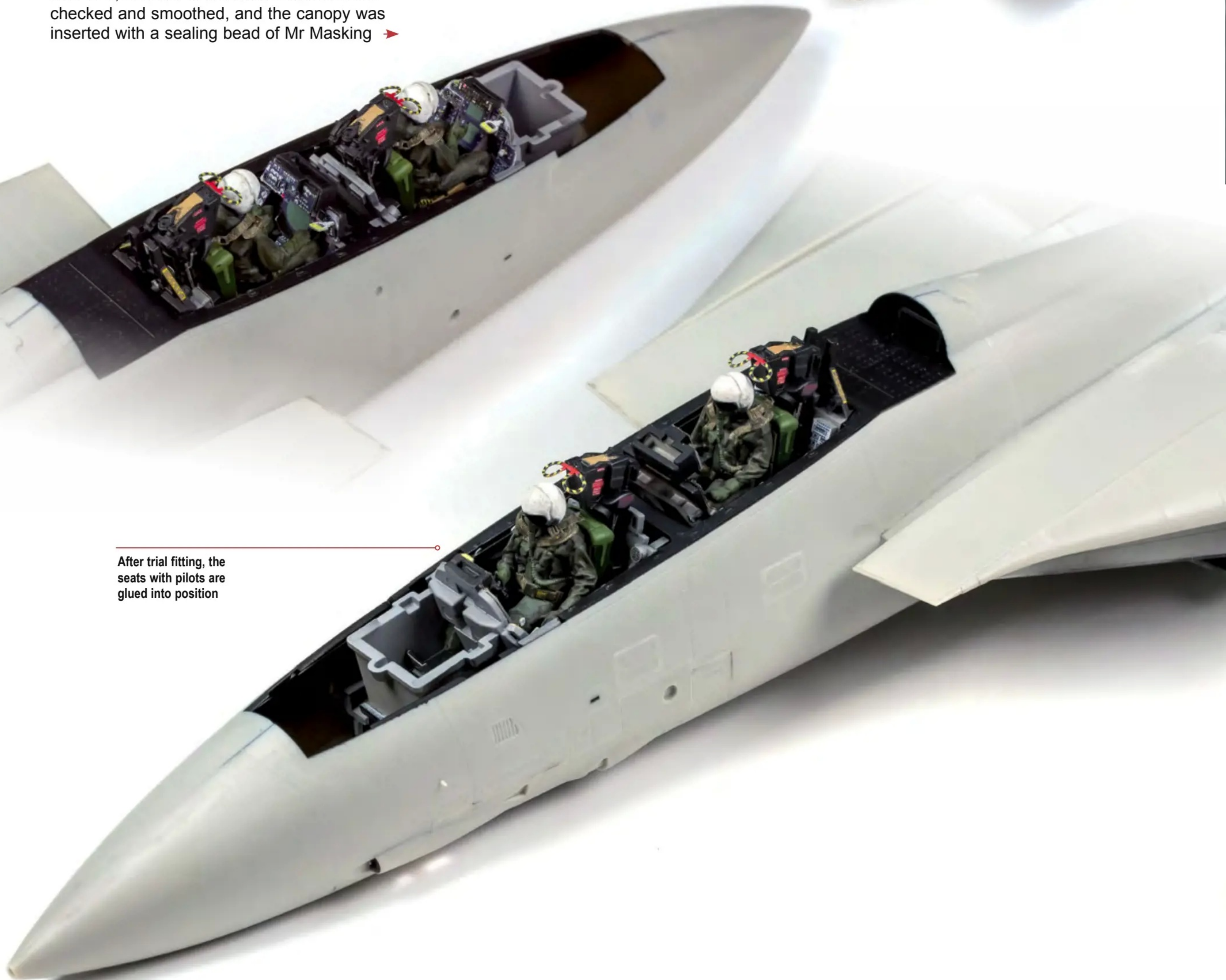
## ◀ COMPLETING THE COCKPIT AND CANOPY

My attention now went to completing the cockpit and canopy. The antiglare shields were painted, weathered, dry brushed and sealed using similar methods as other parts so far. They were then installed into the cockpit while the rails and bottom edging of the canopy itself were painted in XF-85. The bulletproof forward glass panel of the windshield was painted using multiple very light passes of Tamiya X-23 Clear Blue, using the surrounds of the windshield mask from the Eduard set as an ideal solution for masking this colour. It was at this stage that I realised my error and reinstated the static discharge bands by carefully masking their location on the canopy interior and simply airbrushing GX201 GX Metal Black for a simple and frankly better result than what might have been achieved by leaving the part's moulded detail there. By this stage the external surfaces of the windshield and canopy were masked using pre-cut items from the Eduard mask set and cut-out middle sections from the kit. The windshield was bonded into place with TET, allowed to set before seams were checked and smoothed, and the canopy was inserted with a sealing bead of Mr Masking ➔

After a change in direction, it was decided that pilots were needed so they were duly assembled, painted and fitted to the ejector seats. The coloured photo-etch seat belts were repurposed and draped over the pilots



After trial fitting, the seats with pilots are glued into position







## MARAUDER

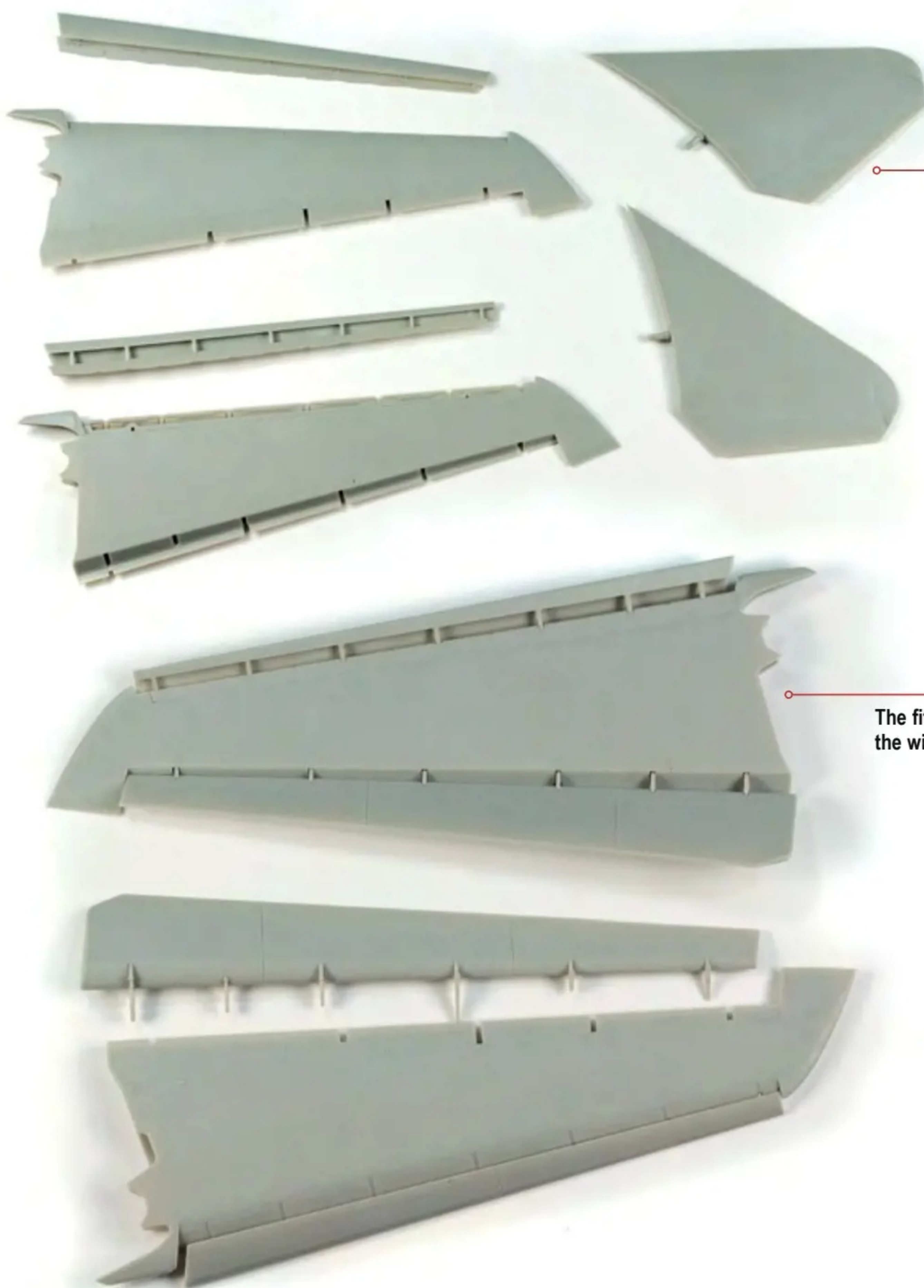
B-26F/G

The WWII American twin-engine bomber B-26F/G Marauder of the European and Mediterranean theaters of operations

- Hasegawa plastic parts
- Photo-etched and pre-painted parts for the finest detail
- Die cut masks for easy painting
- Brass wheels
- Decals for 8 marking options

[www.eduard.com](http://www.eduard.com)

1/72 ITEM 2146



The wings and horizontal stabilisers are put together seamlessly

The fit of the flaps into the wings is confirmed

The tails are assembled, with the part numbers moulded into their interiors to prevent parts mix-ups



◀ Sol Neo. I elected not to permanently glue it as I have had instances in the past where the interior surfaces of clear parts fogged by the end of the project, with no access to get back in and fix it. This way, the masking agent holds the canopy firmly in position for painting, but is easily prized away at the end for final interior clean and polish before final bonding at the very end. With the canopy locked away, I masked other internal areas with Tamiya tape and cut pieces of sponge, as it was time to prime and paint. •



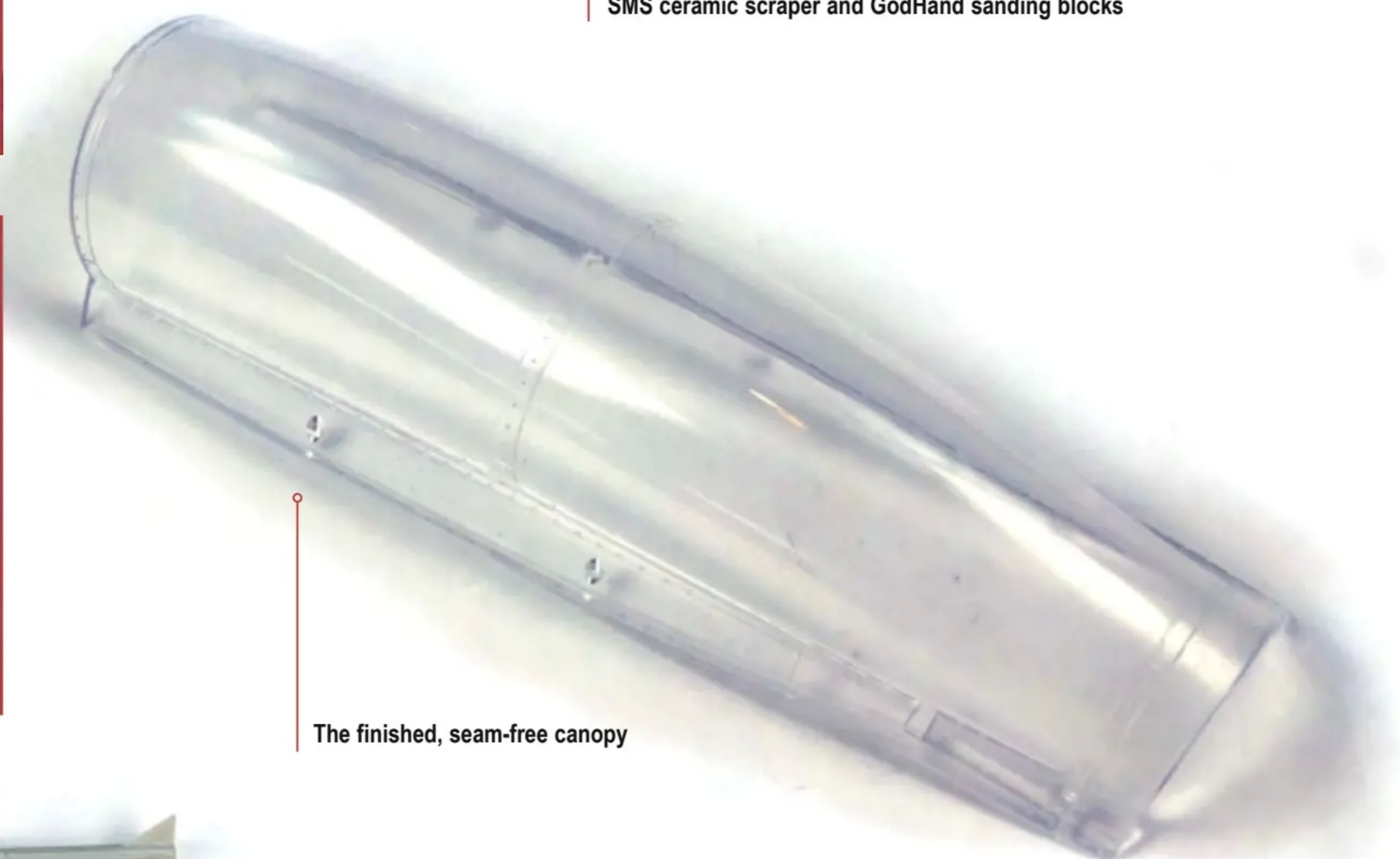
The interior seam was removed with more flexible sanding sponges



Tamiya polishing compounds restored the canopy to its original shine



I removed the moulding seams from the canopy with an SMS ceramic scraper and GodHand sanding blocks



The finished, seam-free canopy



The relevant ordnance was assembled and smoothed



The last cockpit and canopy components ready for painting



Landing gear and some gear bay doors assembled and ready for painting. A few components from the Eduard exterior set were used





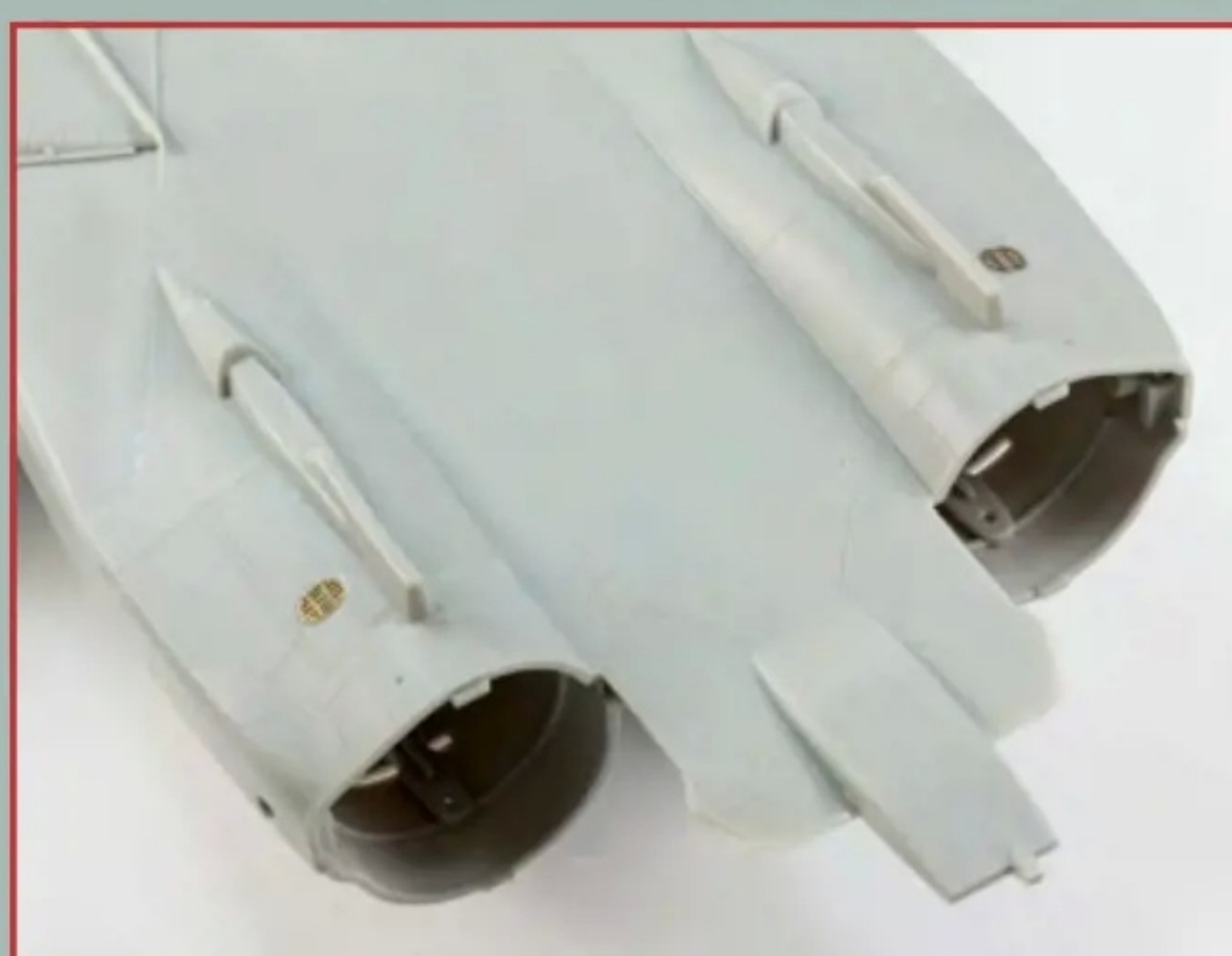
Molotow Liquid Chrome is excellent inside clear parts such as this one inside the chin pod



The front Phoenix pallets and wing pylons are installed



The chin pod is bonded forward to the nose gear bay



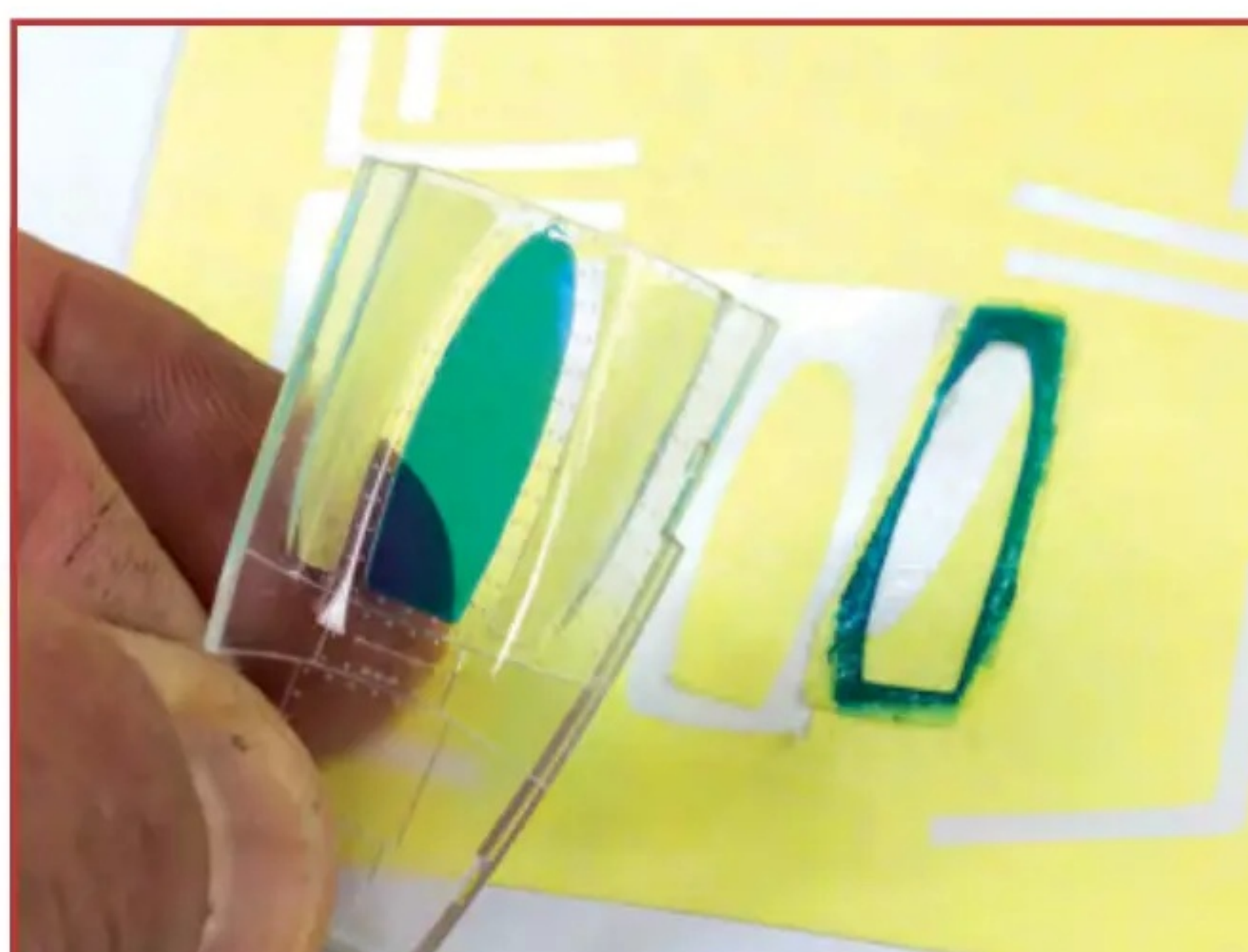
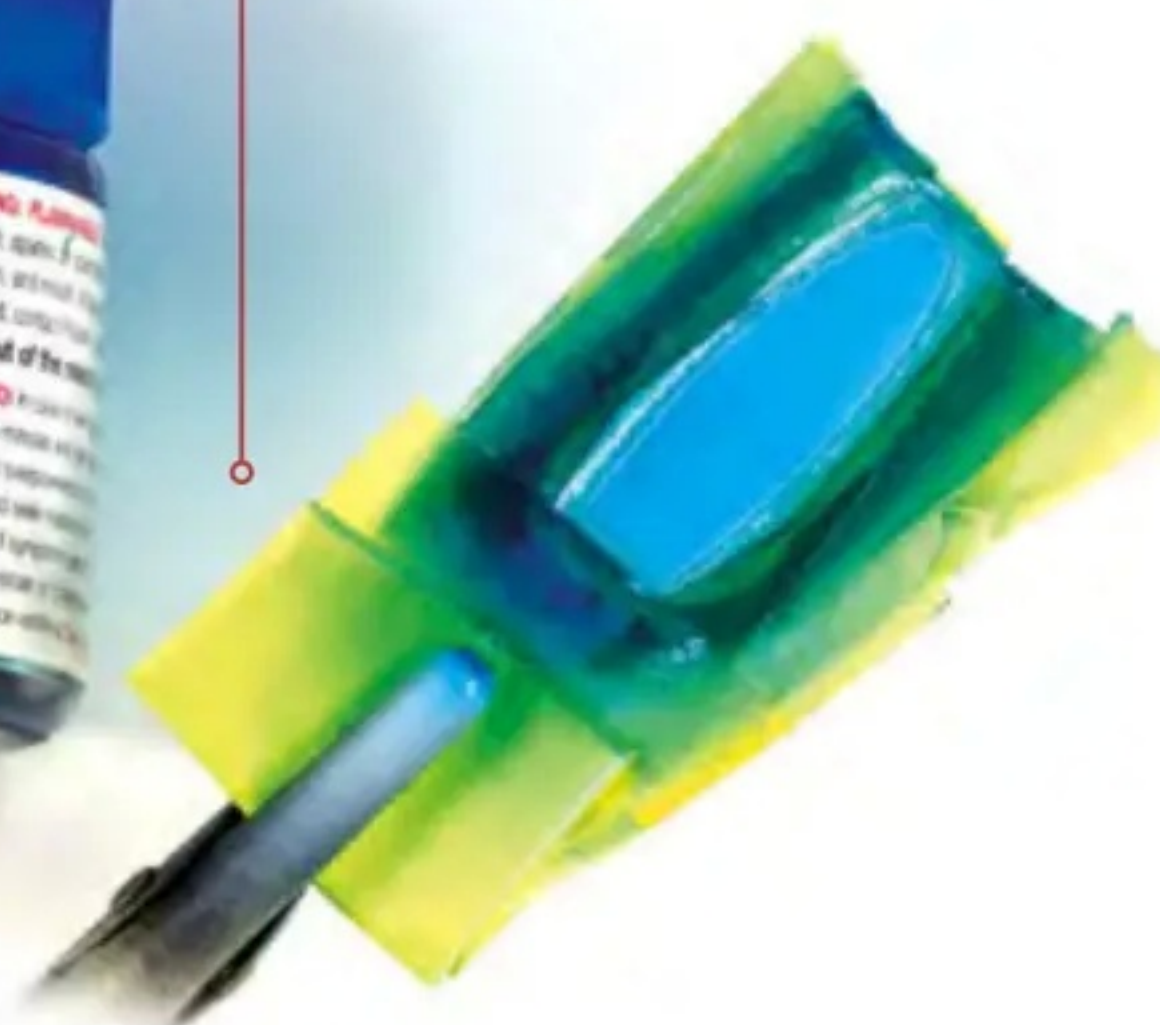
More photo-etch detail is cemented with Tamiya Extra Thin



There is a seam along the exhaust nozzle which is not a final panel line so it is filled with black CA



X-23 is airbrushed onto the interior of the windshield in gradual layers to prevent obvious thick and thin spots in the paint



The outside of the exterior canopy mask was used to mask the blue area



X-25 Clear Green is similarly airbrushed gradually to achieve an even coat

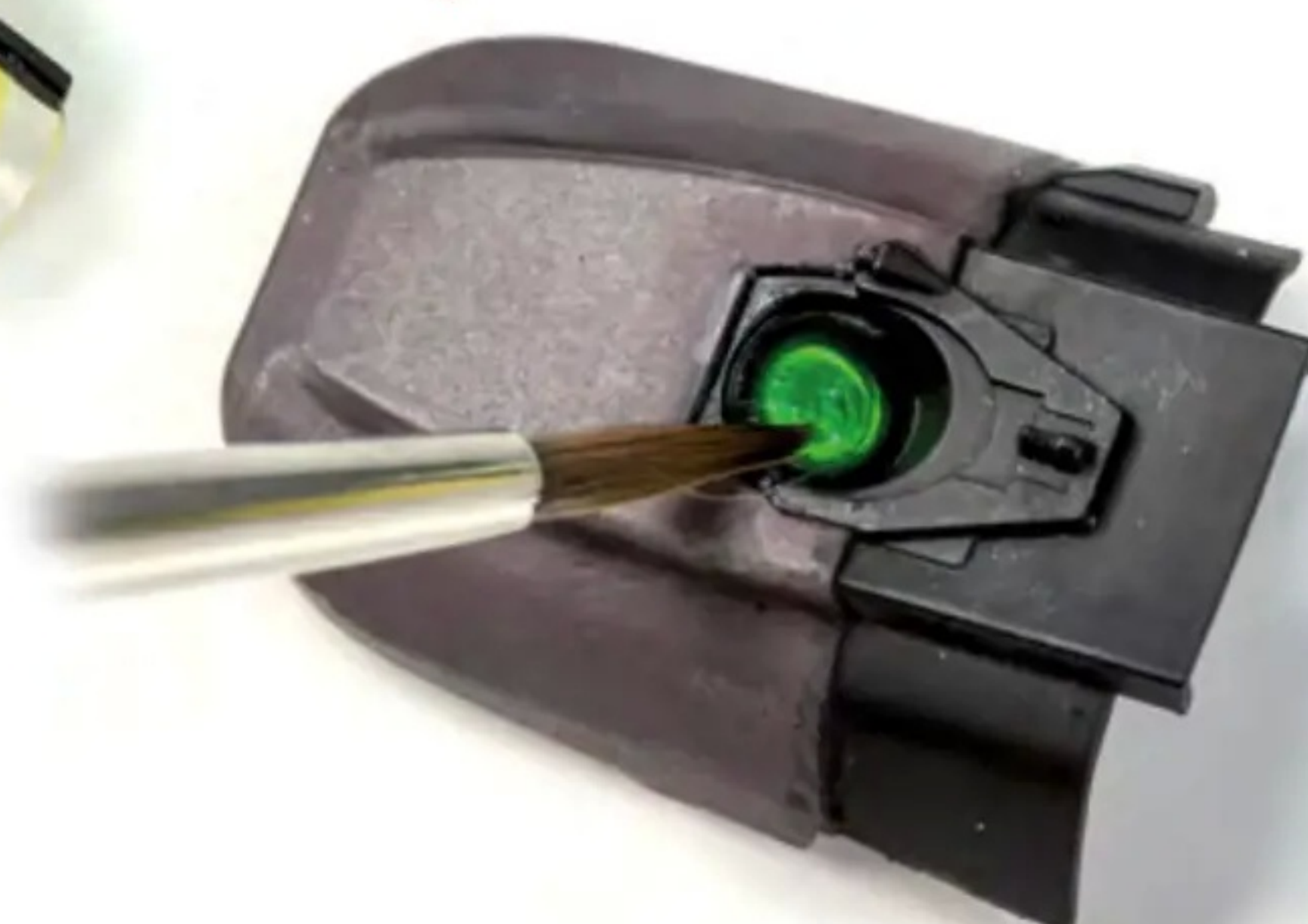


Exhaust interiors painted and ready



Antiglare shield and canopy interiors complete

The clear part on the forward antiglare shield is secured into place with brush-painted Pledge for a simple and perfectly invisible union





## MODELSPEC

Tamiya 1:48 Grumman F-14A Tomcat  
Kit No. 61114

### Model Materials:

- Tamiya Extra Thin Cement
- Revell Contacta Cement
- VMS Flexi 5K CA
- Ammo Black Slow Dry CA
- Ammo Ultra Glue
- Gorilla Glue Clear

### Paints and Finishing Products:

- Mr Surfacer 1500 Black
- Mr Surfacer 500 Grey
- Tamiya acrylic paint
- Tamiya lacquer paint
- Mr Color lacquer paint
- Mr Hobby acrylic paint
- Vallejo Model Color acrylic paint
- Tamiya enamel paint
- Liquitex acrylic ink
- Molotow Liquid Chrome
- Mr Color Levelling Thinner
- Vallejo airbrush flow improver
- Tamiya acrylic paint retarder
- Tamiya lacquer paint retarder
- Alclad Aqua Gloss
- VMS varnish Satin
- GX114 Flat clear
- Pledge floor varnish
- Deluxe Materials Looks Like Glass
- Oil paints- various brands
- Odourless solvent
- Tamiya Weathering Master sets B, C and D
- Mr Weathering Color- various colours
- Mr Masking Sol Neo
- Tamiya masking tape, all widths
- Tamiya masking tape for curves
- Silhouette Portrait 2 cutter
- Oramask 810 adhesive frosted vinyl
- Dental dam
- Micro Set
- Micro Sol

### Modelling Tools Used:

- SMS ceramic scraper
- Tamiya Fine Craft Saw
- Number 11 Scalpel
- Tamiya files
- Vallejo diamond files
- Abrasive rubber bullet
- Ultimate Modelling Products sanding sticks
- Infini soft sanding sticks
- Infini sanding sponge sheets
- GodHand sanding blocks
- SMS sanding sticks
- Tamiya polishing compounds
- Fibreglass pen
- Pin vice and drill bits
- Infini Type A Easycutting mat
- Mini craft pegs
- Soft padded clothes pegs
- Sable brushes- various brands and sizes
- Bamboo skewers

### Airbrushes:

- Sparmax SP-20x 0.2mm airbrush
- Sparmax Max-4 0.4mm airbrush
- Tamiya SX 74802 0.5mm airbrush
- Hseng AS186 Air Compressor



To paint the inside of the exhaust nozzles, an initial very light coat of C-69 Off White was used before thin masking tape was carefully applied



LP-27 German Gray was then used to add the dark sections



Soot from Tamiya Weathering Master Set B is excellent for weathering the exhaust cans and nozzles



The nozzles trial fitted







The finished painted result prior to weathering



Weathering inside the nozzles looks good

# NEXT TIME

Next time Mark continues construction...



LEVEL 4

Can be finished as either an Ar 240 A-01 or A-02  
03798 Arado Ar 240, 1:72

LEVEL 4

Can be finished as either Do335A-1 or Do335A-12  
03795 Dornier Do 335 Pfeil, 1:48

LEVEL 4

03803 Airbus A340-300 "Lufthansa" New Livery, 1:144

LEVEL 5

05458 Darwin's Discovery Barque H.M.S. Beagle, 1:96

LEVEL 2

STAR WARS  
1/72 scale  
TIE ADVANCED x1  
SERIAL FLIGHT SYSTEMS TIE ADVANCED x1 PROTOTYPE  
01214 TIE Advanced x1 (Bandai), 1:72

Available from all good model stockists and online from

**hobbycraft**

[hobbycraft.co.uk/brand/revell](http://hobbycraft.co.uk/brand/revell)





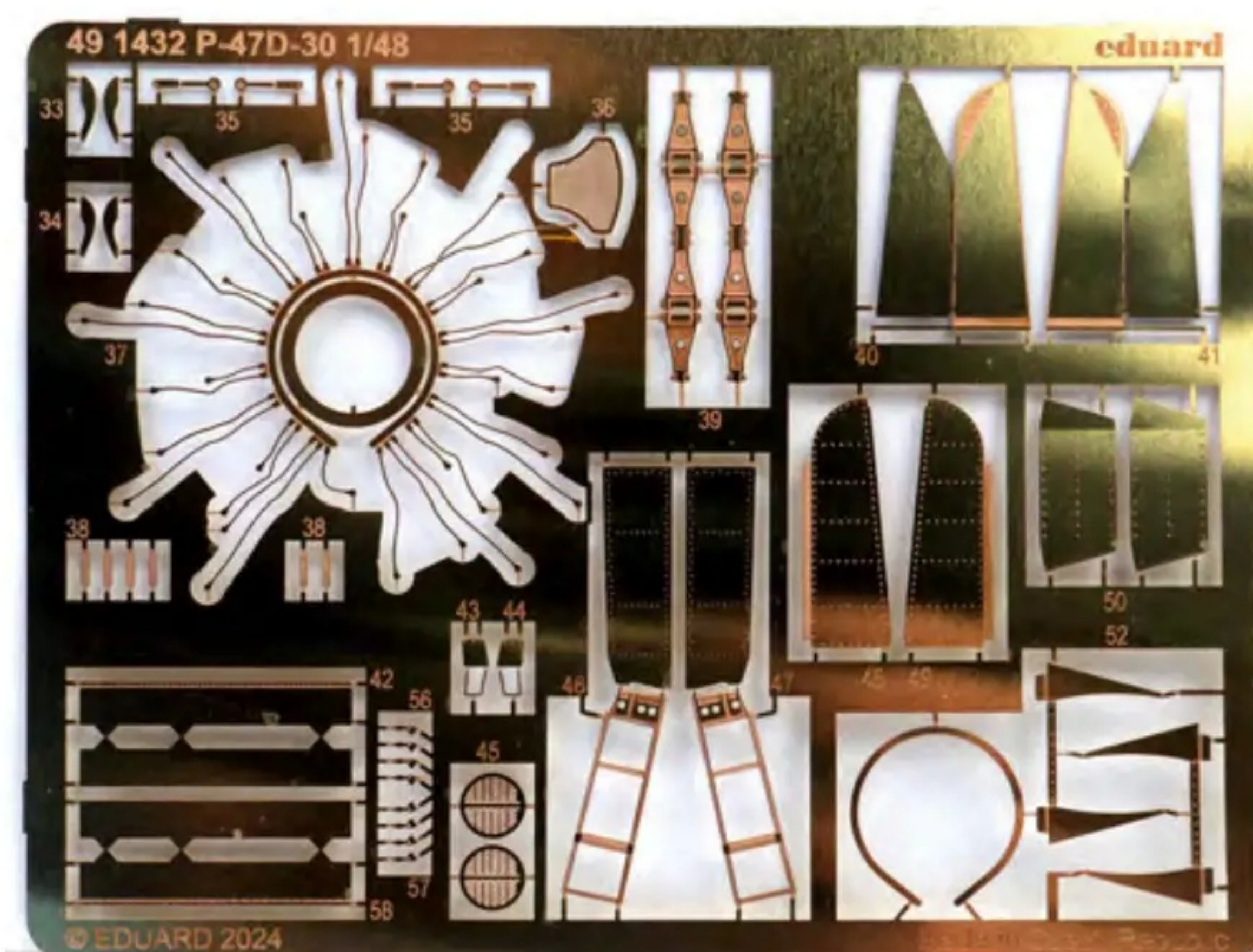
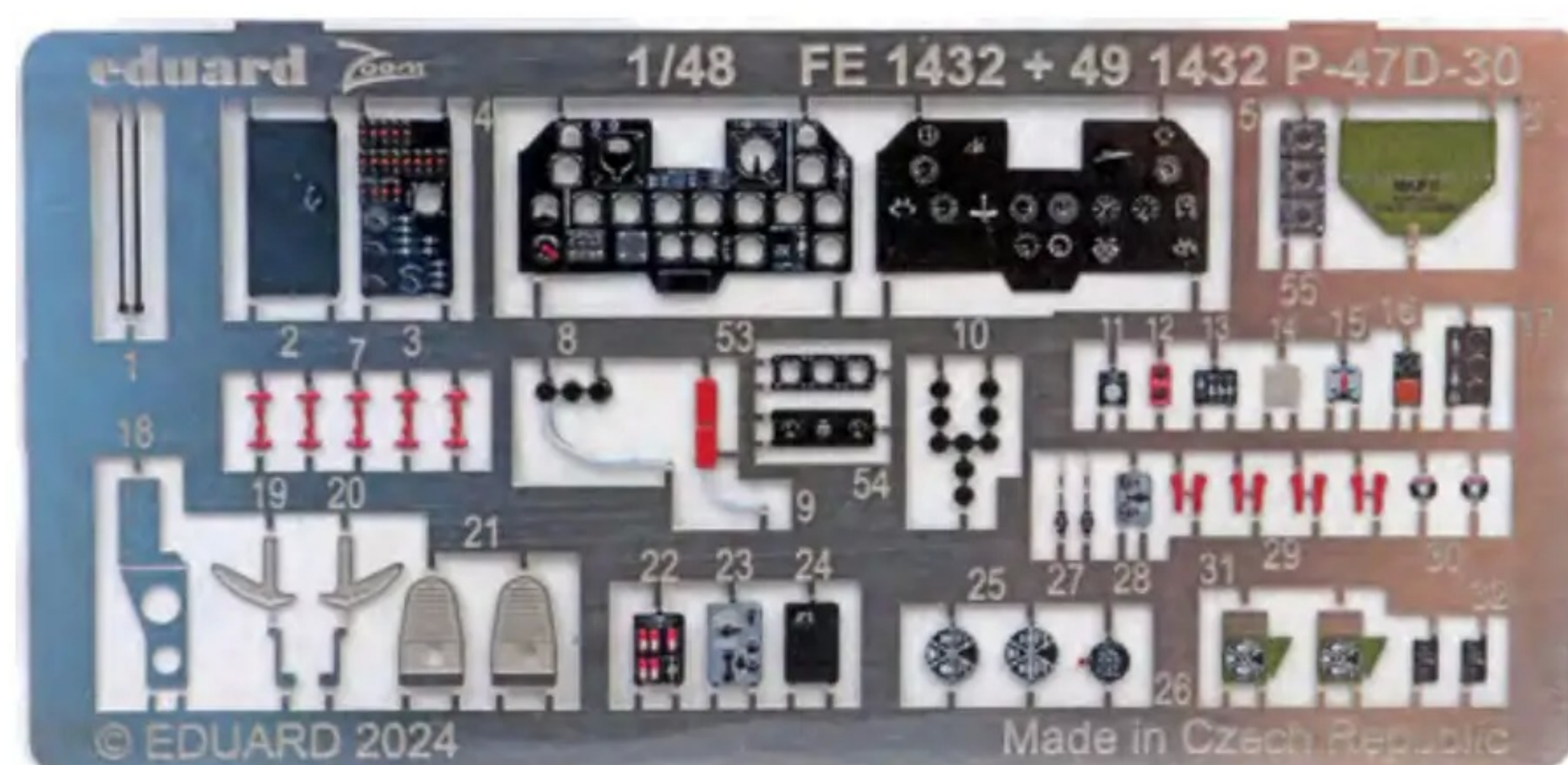
## KIT PREVIEW

# MINIART THUNDERBOLT UPGRADES

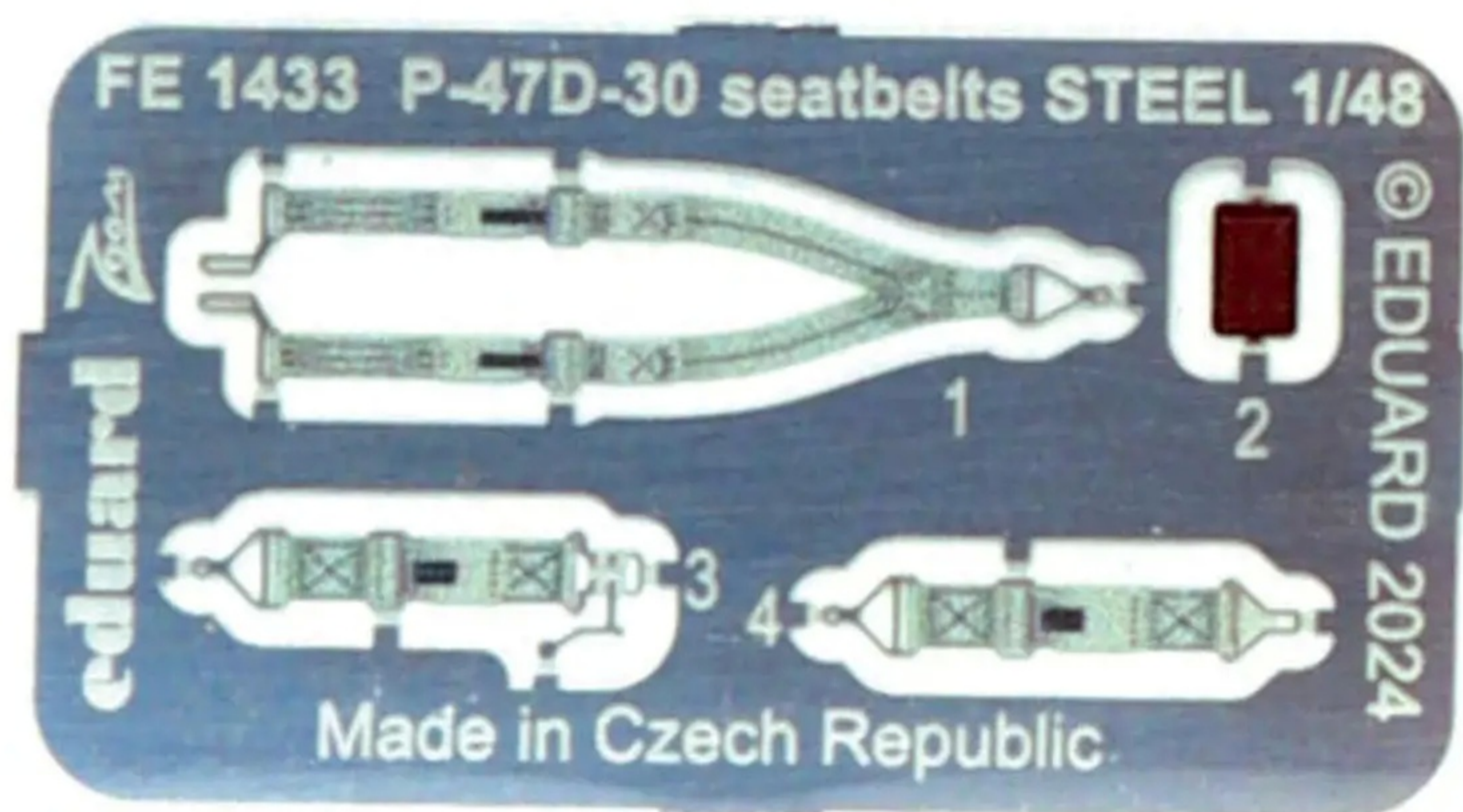
Eduard has produced a range of accessories for the recent P-47D-30 Thunderbolt kit.

**491432 Eduard Photo-Etch  
P-47D-30 for the MiniArt kit**  
**USD\$29.95**

Two photo-etched frets are supplied. The first is pre-coloured and mainly focuses on upgrade parts for the cockpit including the instrument panel, rudder pedals and many smaller details. The second fret is brass etched and offers mainly exterior elements including a very nice ignition harness for the engine.







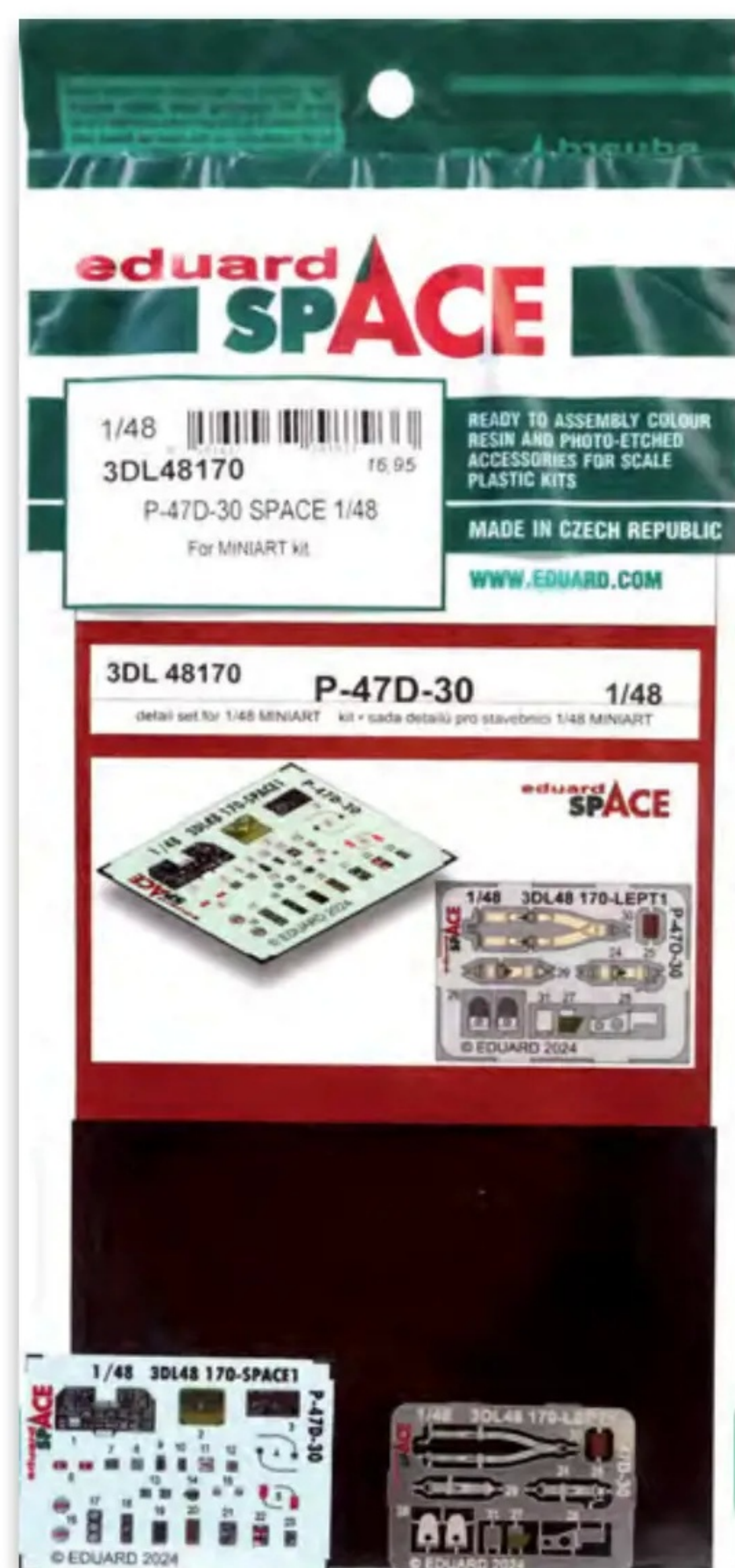
**FE1433 - Eduard Photo-Etch  
P-47D-30 Seat Belts for the MiniArt kit**  
**USD\$10.95**

This new photo-etched fret supplies a full photo-etched harness for the seats in the new MiniArt 1:48 scale P-47D-30 kit. Details are picked out, with stitching and hardware printed directly onto the photo-etched straps and mounts. The half-tone rendering of shadows is also very well done. This harness set will be the ideal accompaniment to the photo-etched detail set reviewed above.



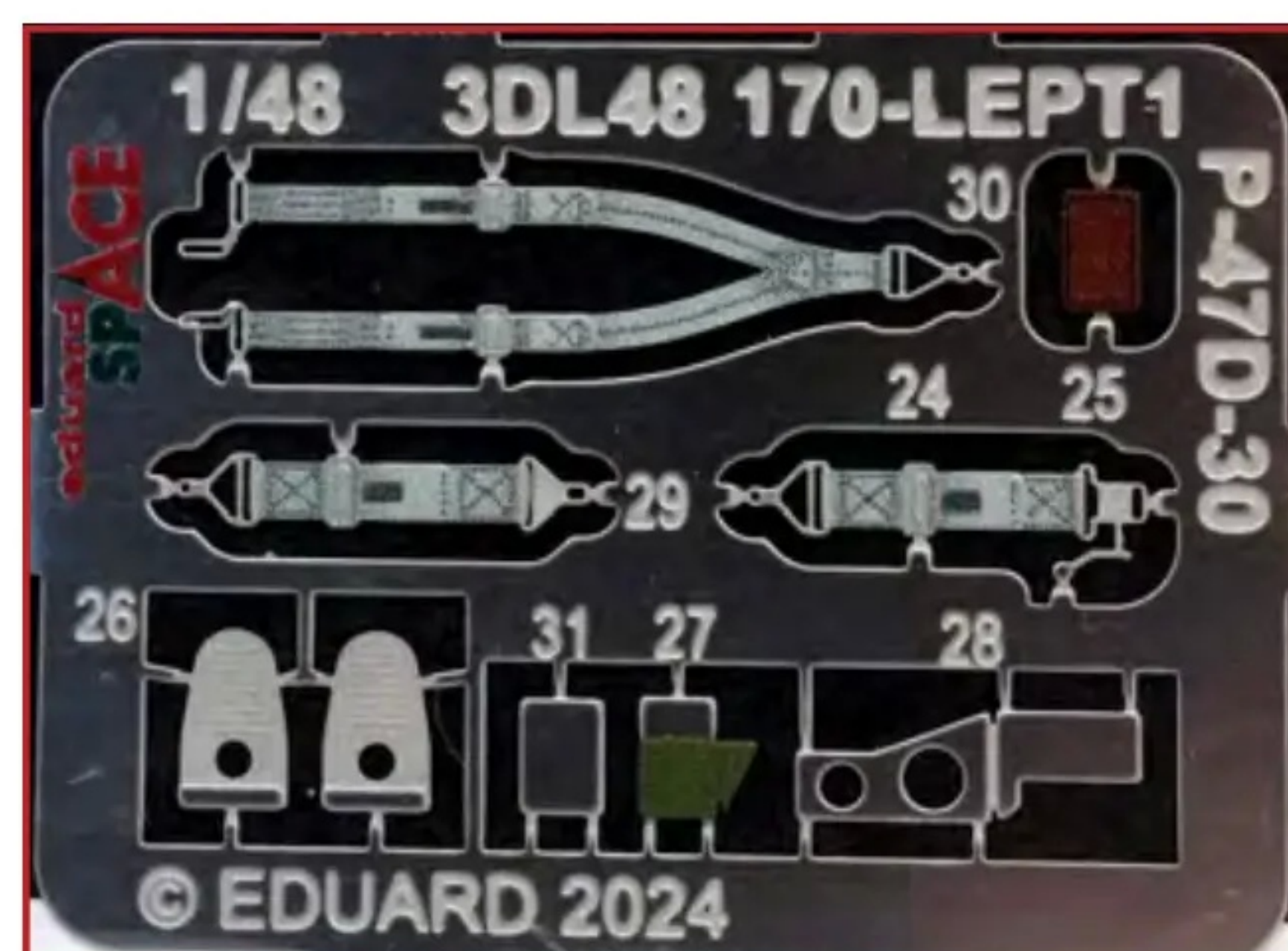
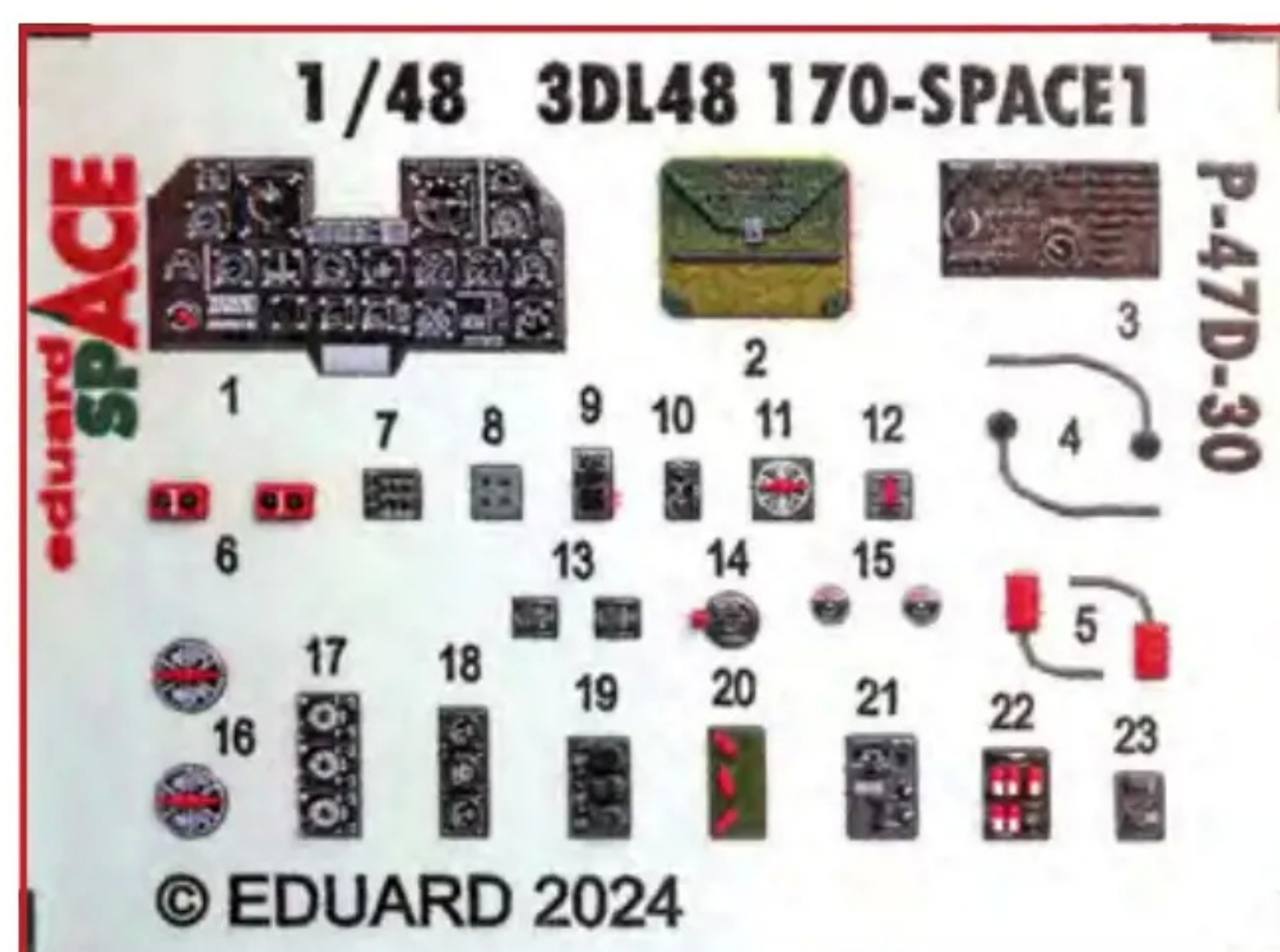
**EX1026 Masks  
P-47D-30 for MiniArt kit**  
**USD\$10.95**

Die-cut, self-adhesive masks for the kit canopy and all three wheels. These represent a fast and accurate solution for a time consuming and often disliked modelling task. The use of the photo-etched fret will result in a noticeably better detailed cockpit, especially around the instrument panel and side consoles. The addition of the photo-etched harness straps will also be a highly visible upgrade. The 3D printed and photo-etched SPACE cockpit upgrade is a legitimate alternative to the photo-etched upgrade. The masks will save time and add sharp precision to the clear parts too!



**3DL48170 Eduard SPACE  
P-47D-30 for MiniArt kit**  
**USD\$29.95**

Eduard has expanded their range of accessories to include a SPACE multi-media update set for the MiniArt 1:48 scale P-47D-30 Thunderbolt kit. This SPACE set comprises a 3D printed instrument panel and separate resin parts, plus photo-etched parts for the half-tone harness straps for the pilot and crew. The face of the instrument panel is pre-painted with impressive detail. The printed faces look good in real life - actually significantly better than my much larger-than-life studio photos! The STEEL photo-etched fret supplies nice flexible pre-coloured harness straps for the pilot. Detailed instructions are included.



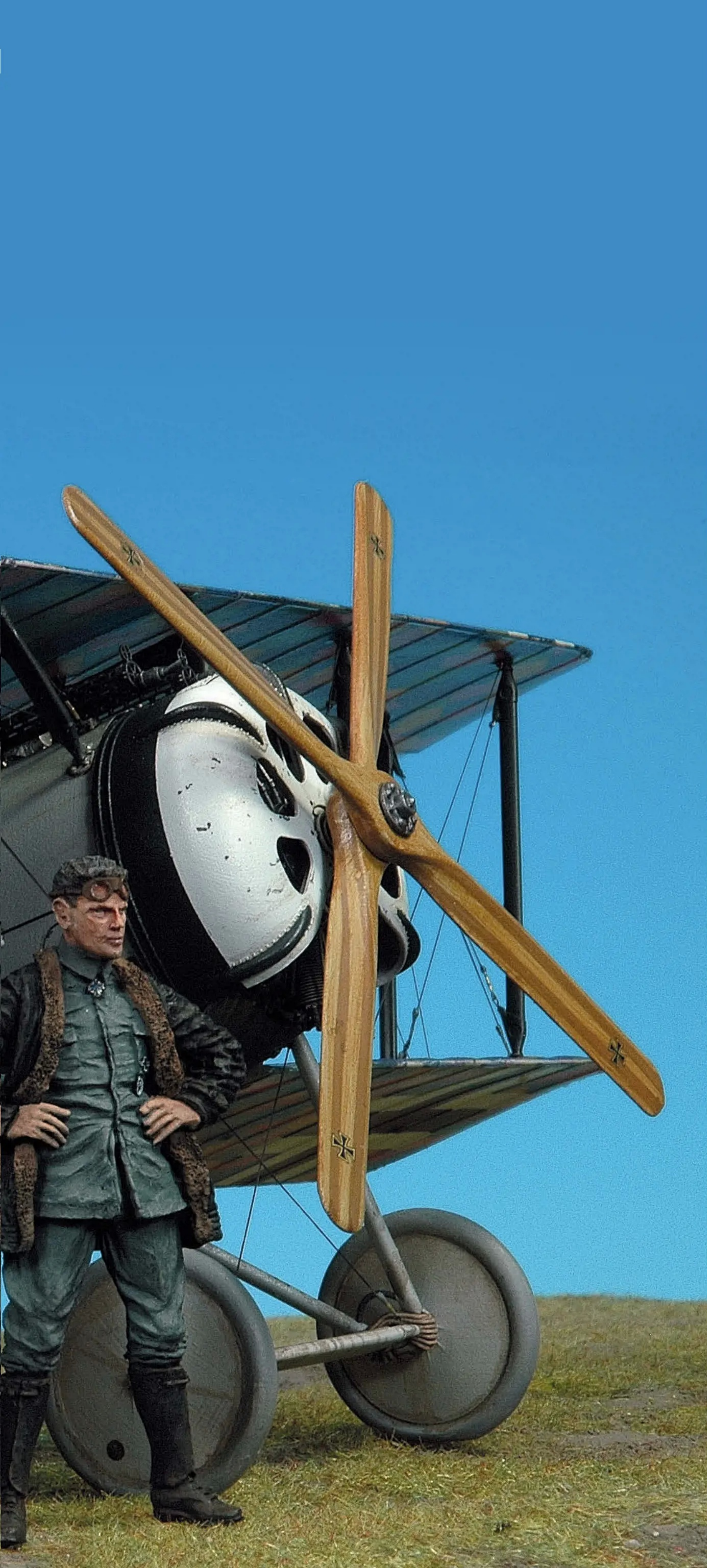
These are very useful investments for your MiniCraft 1:48 scale P-47D-30 Thunderbolt. Thanks to Eduard for the review samples [www.eduard.com](http://www.eduard.com)



# POUR LE MERIT







## Gary Edmundson builds Aviattic's brand new 1:32 scale Pfalz D.VIII Pour le Merit Collector's Edition.

**R**ichard Andrews is a staunch enthusiast of Great War aviation and has devoted a big effort to his company of Aviattic, producing scale models, accessories and decals. When his 1:32 Pfalz D.VIII kit was announced early in 2022, I was asked by Editor Brett Green if it would be something I'd be interested in building for this magazine. I eagerly accepted, and was honoured to receive the "Pour le Merit" release when the models were finally sent out after some delays were sorted.

Keenly anticipated by the WWI aviation modelling community, the beautifully packaged model has been lauded with praise. From the finely detailed 3D printed parts to the nicely moulded resin fuselage & wings, the quality of the contents seems paramount. There are plenty of optional parts and many extras of the tiny ones, and also additional prints of some of the smaller decals. Even the comprehensive instruction guide is of a glossy high quality, including reference photos of the accurate replica Pfalz D.VIII built by Mikael Carlson of Sweden.

Since the model included a resin figure of Lt Paul Bäumer, I decided to build the aircraft flown by him when he led Jasta "Boelcke" in May 1918.

### CONSTRUCTION PLANNING

With the kit consisting of both cast and printed resin along with etched metal details, the simplicity of working with styrene was gone, and I was out of my comfort zone. I have previously experienced 3D printed resin to be quite brittle, and utmost care is needed when trimming and drilling the parts. Bonds between parts are tricky, and super glue had been the only adhesive in the past with which I've used for these materials. Luckily a recent discussion on an Internet forum had mentioned using 2-part epoxy glue as an adequate bonding agent. I've made many household repairs with 5 minute epoxy, but never considered it for gluing models together since it seemed such messy material to work with. Before starting my project, I picked up some Lepage's Speed Set.

I reviewed the instructions well before beginning work, and also read thoroughly a build review by Nigel Rayner who'd put together the pre-release model shown at Telford during Scale Model World in November of 2023. The guides emphasized test fitting throughout the phases of the build, which was great advice. I tend to be an impatient builder and was determined to mend my ways this time around. ➤



### ◀ 3D PRINTED PARTS

Separating the printed parts from their supports needed much care. I found that any stress on the parts can have them break, and used a razor saw to help separate the more delicate joins. Even the shock from a pair of sharp Tamiya cutters can knock a small part from the runner into oblivion, which was the case with the tiny fuel selector handle in my case (it was a good thing that Aviattic provided a spare of these!). The level of detail on the printed parts was extraordinary, and the MG08s were a great example. Even though I took utmost care to remove them from the supports, I still ended up breaking off both cocking handles. After a diligent search both were found and deftly glued back on under high magnification.

### SIEMENS HALSKE SH.III ENGINE

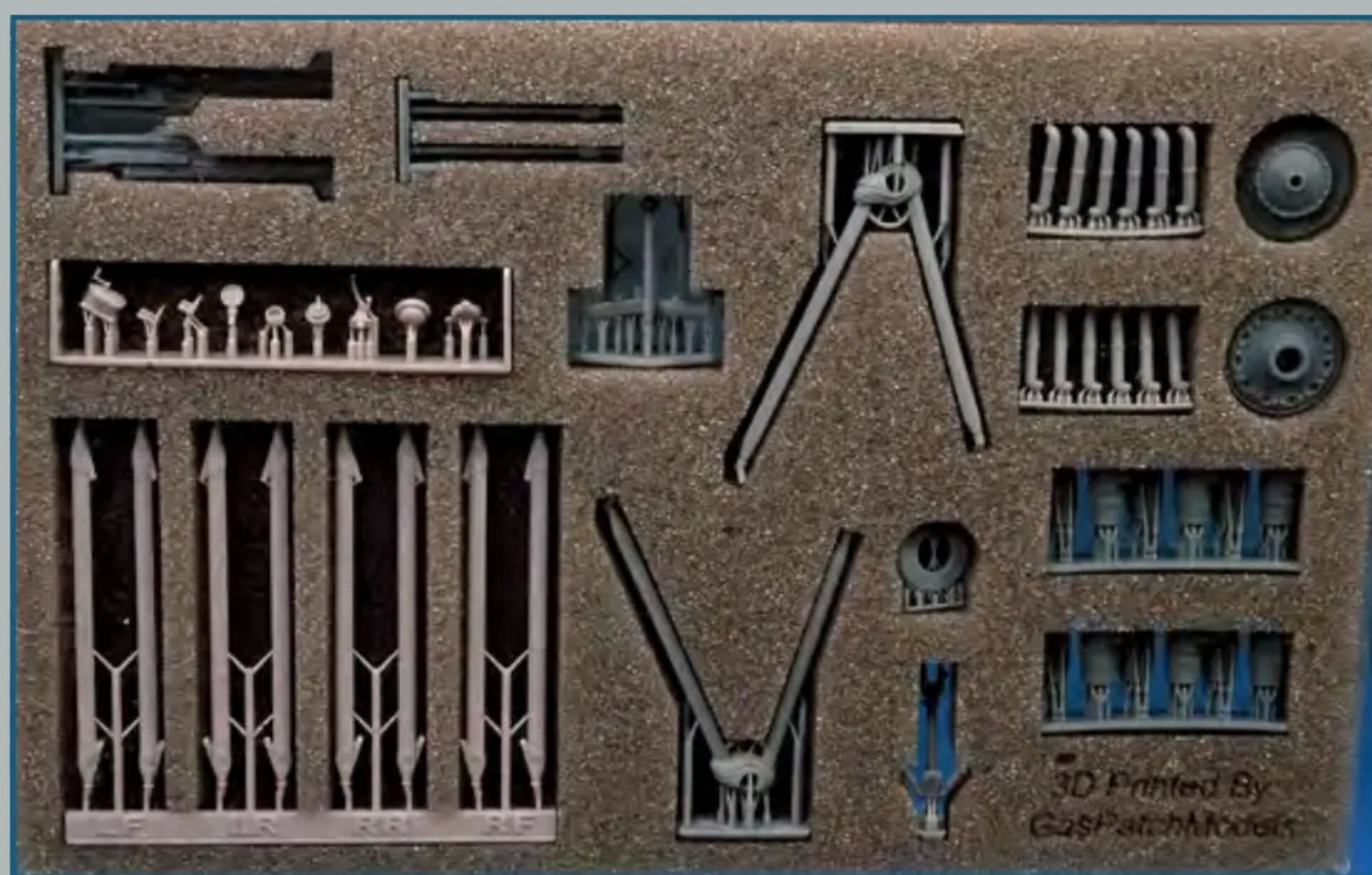
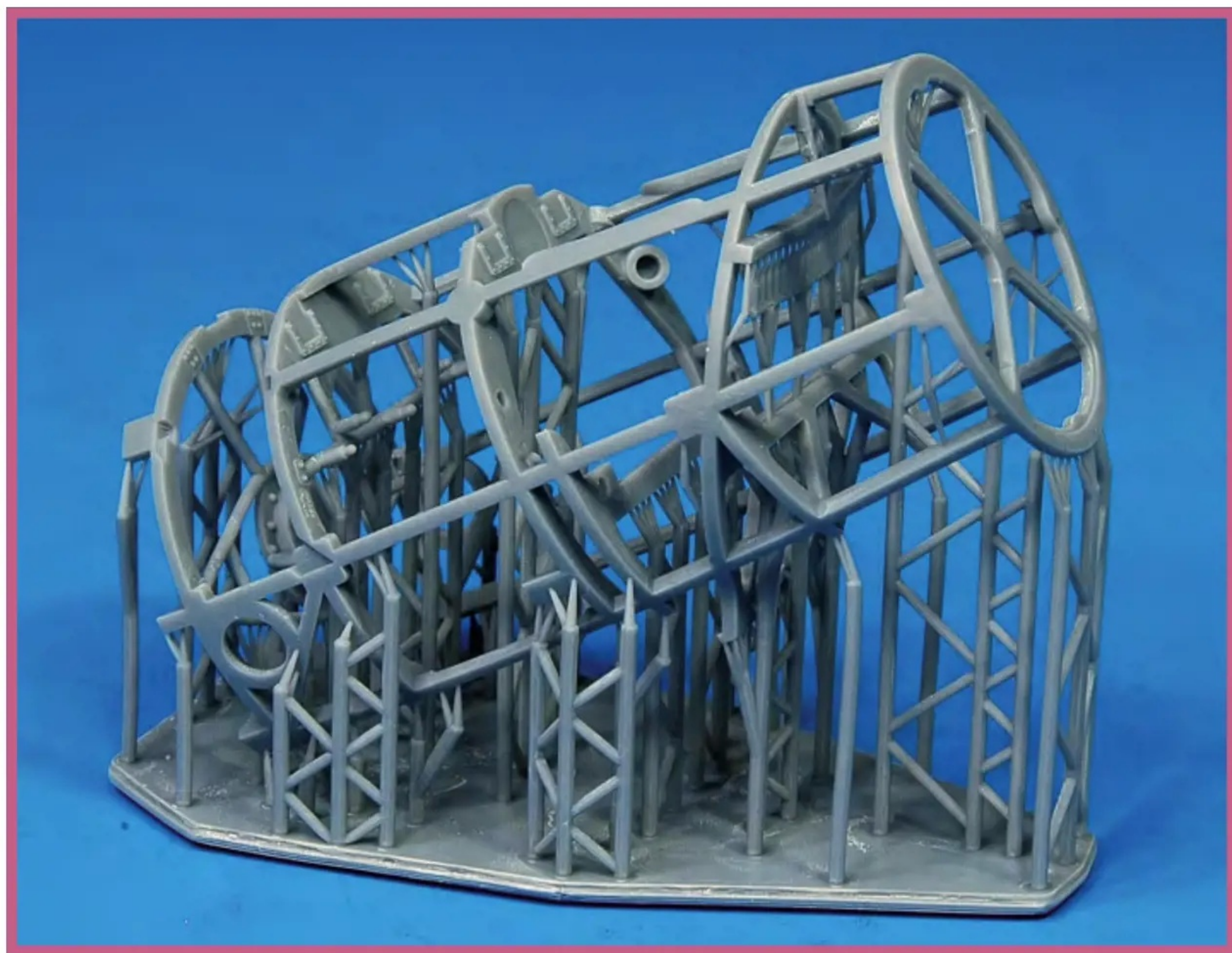
After removing the printed cylinders and engine housing halves from their supports, they were cemented onto the crankcase with the help of solid, defined bases. The push rods were quite fine, and spark plug detail was provided on the cylinders.

The intake pipes that attach to the back had to fit into recesses top and bottom. Possibly because I'd glued some cylinders at a slightly forward angle I found a few of the pipes didn't reach the locating points. By removing the lower connection pin, I was able to cement the

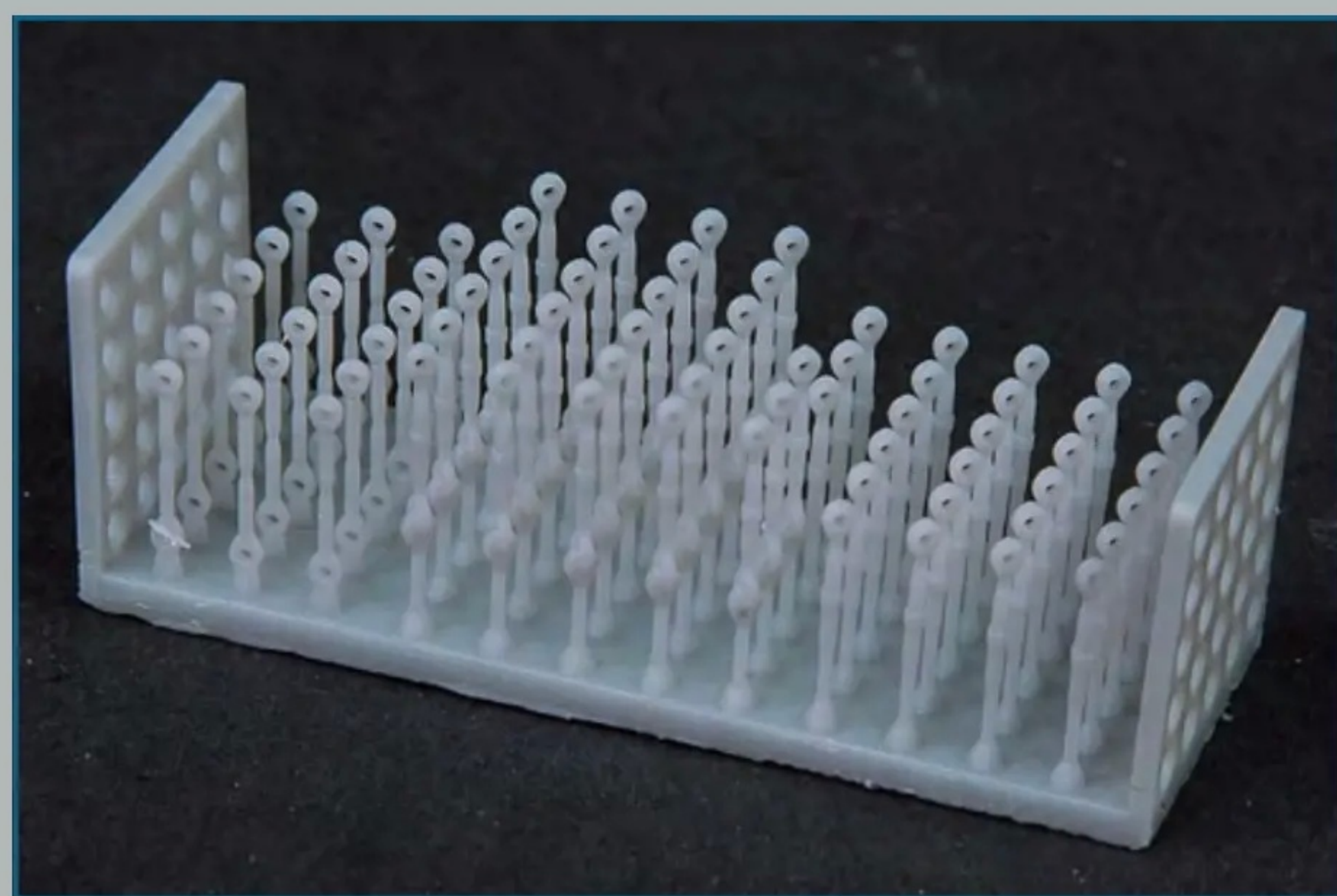
pipes into the top of the cylinder with the lower end very slightly above the intended anchor point. No problem, since that gets covered by a plate and is not seen on the final assembly. I used EZ-Line for the ignition wires, cemented into position with super glue.

The engine was airbrushed with Tamiya's Flat Black XF-1, and then later dry-brushed with

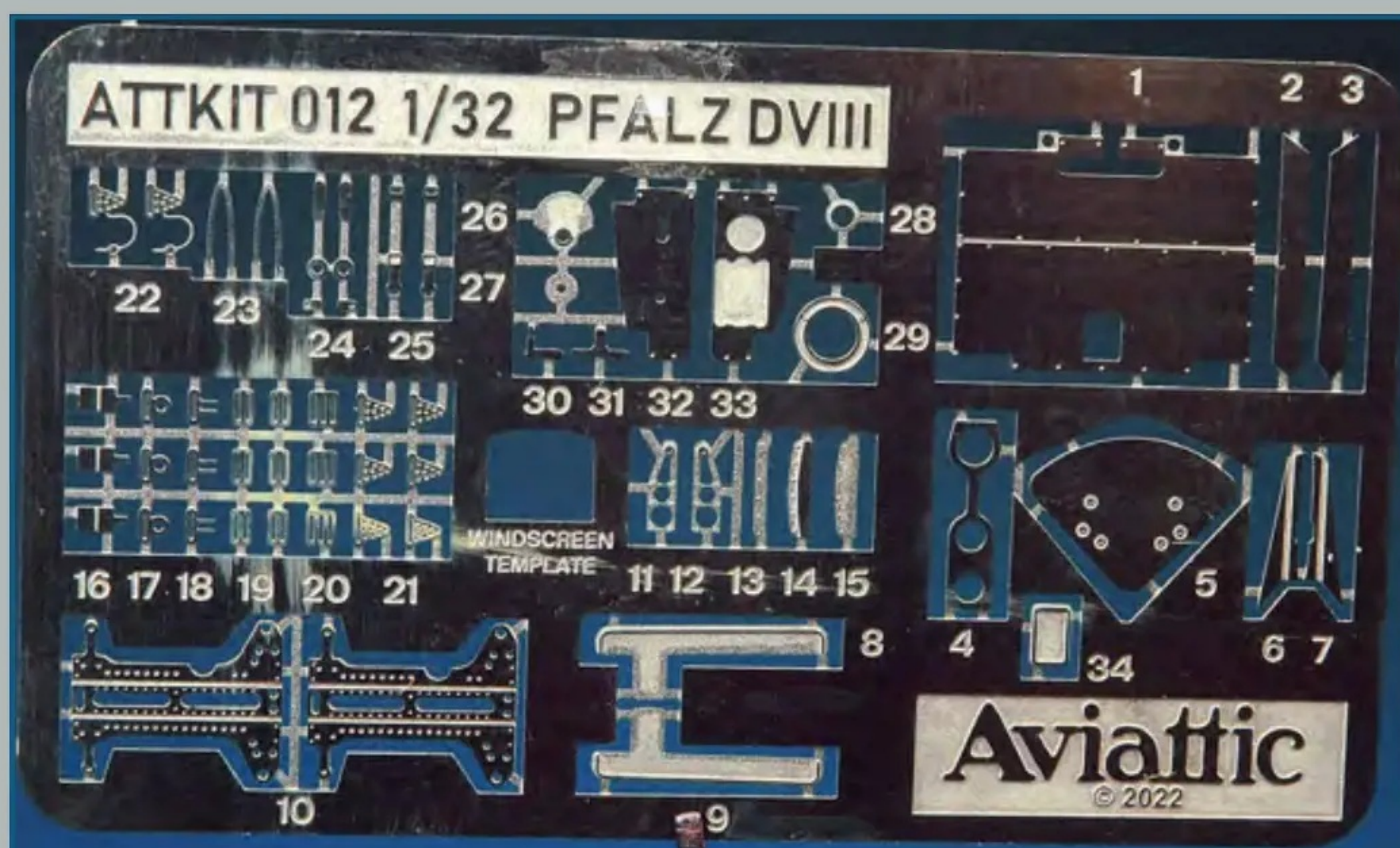
a mix of Model Master Chrome enamel toned down with a touch of black & raw umber oil paint. This brought out the details of the valves, rods and cylinder vanes. The front of the crankcase got an additional rub of Uschi metal polishing powder 4009 Steel Type. The spark plugs got a touch of off-white on the insulator section, and a brass tip using Vallejo acrylics.



Gaspach printed the very finely detail parts contained in this carefully packaged lot, including MG's, engine parts, struts and instruments.



A complete set of Gaspach resin turnbuckles especially designed for this kit were included.

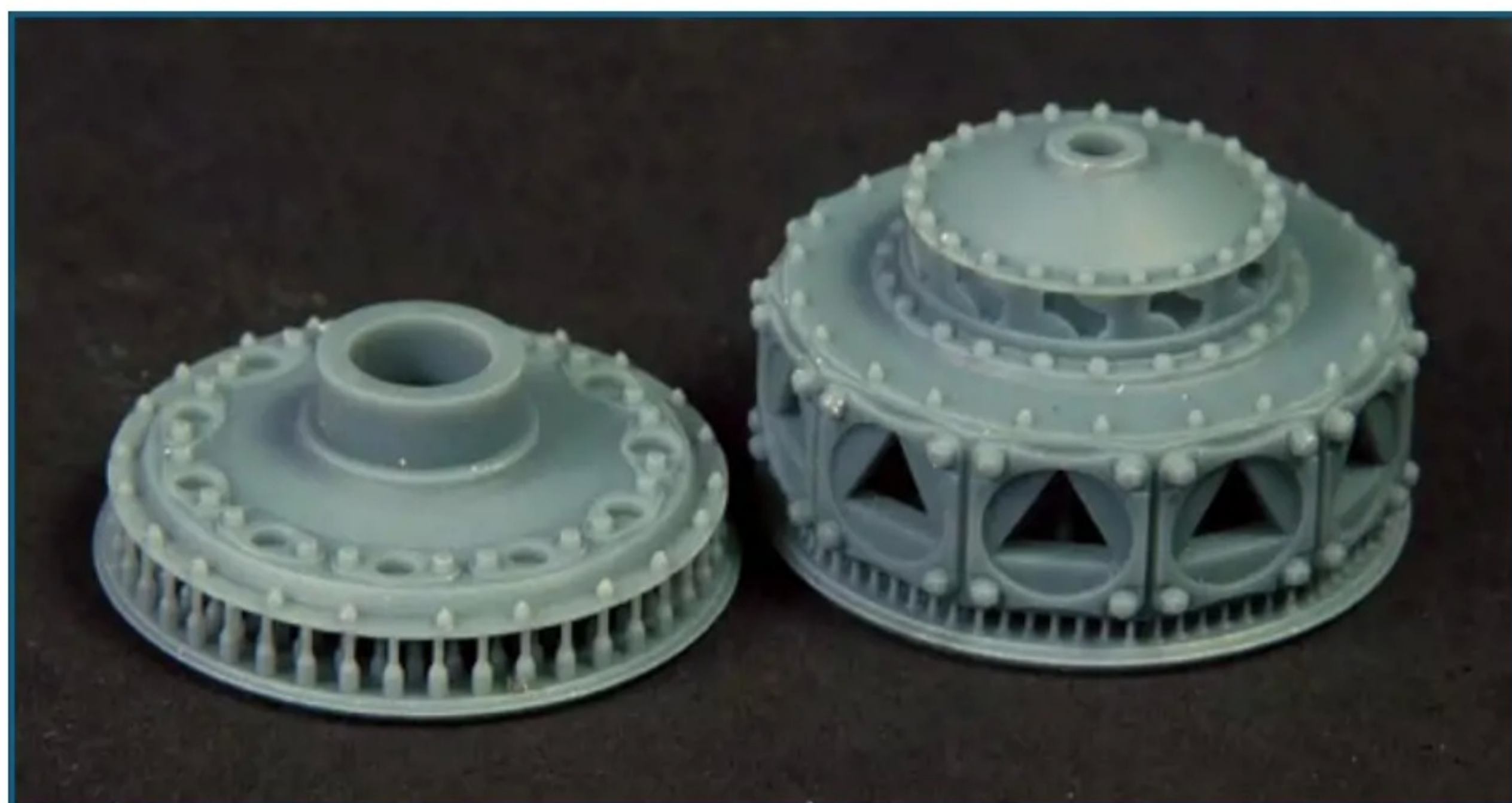


A comprehensive etched metal sheet had a lot of extra parts for even the clumsiest modeller. I unfortunately lost part #12 of which there was no spare.

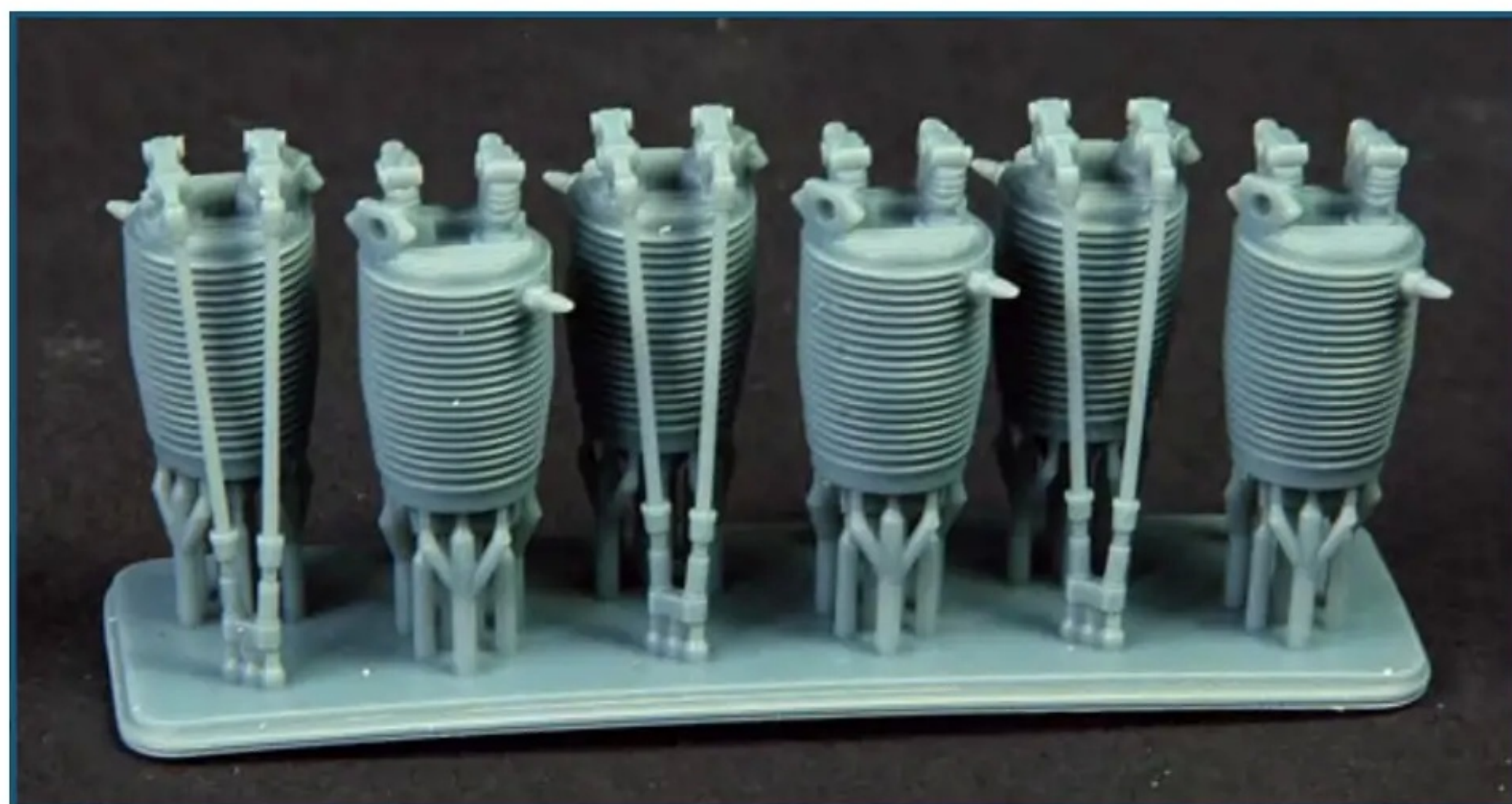


Cockpit controls and the MG's were finely printed, and the guns were tricky to remove from the supports without breaking the delicate detail.





Front and back of the engine housing.



The very finely printed engine cylinders.



Completed front of the engine.



The intake pipes at the rear of the engine needed to have the lower locating pins removed since the pipes were a slightly too short to reach.



After airbrushing the engine flat black, it was drybrushed with Model Master Chrome enamel, with a rubbing of Uschi steel powder on the front.

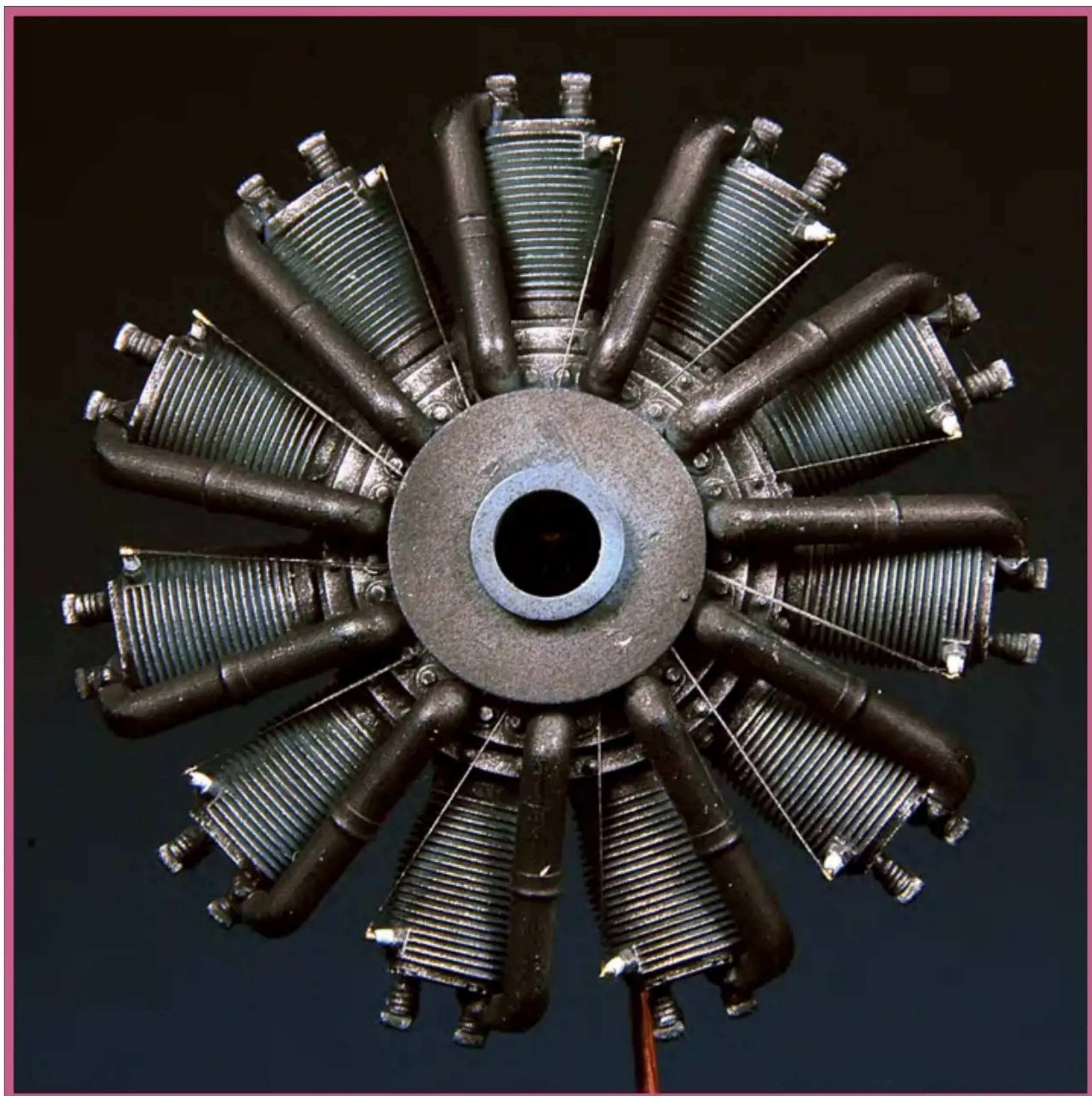
## COCKPIT SECTION

One of the trickiest parts to this model is the cockpit section, since the frame from the firewall to back behind the pilot is all in one printed cage. The control column and the rudder pedals are part of the lower wing, onto which the cage is placed on top of. To place control cables appropriately is therefore quite difficult to manage if the fuselage halves are joined over the cage before cementing the assembly to the lower wing.

Since I wanted to seal up the fuselage before gluing it down onto the lower wing, I took a different approach to the control rigging, and used small sections of very thin styrene in front of and in behind the pilot's seat (where the gap between them would be invisible under the seat). Small sections of fine stretched sprue were glued to the control column and rudder pedals, just long enough to disappear under the seat. At the rear of the cage, the cable bulkhead had sections of thin sprue also glued into it - again just long enough to pass below the seat.

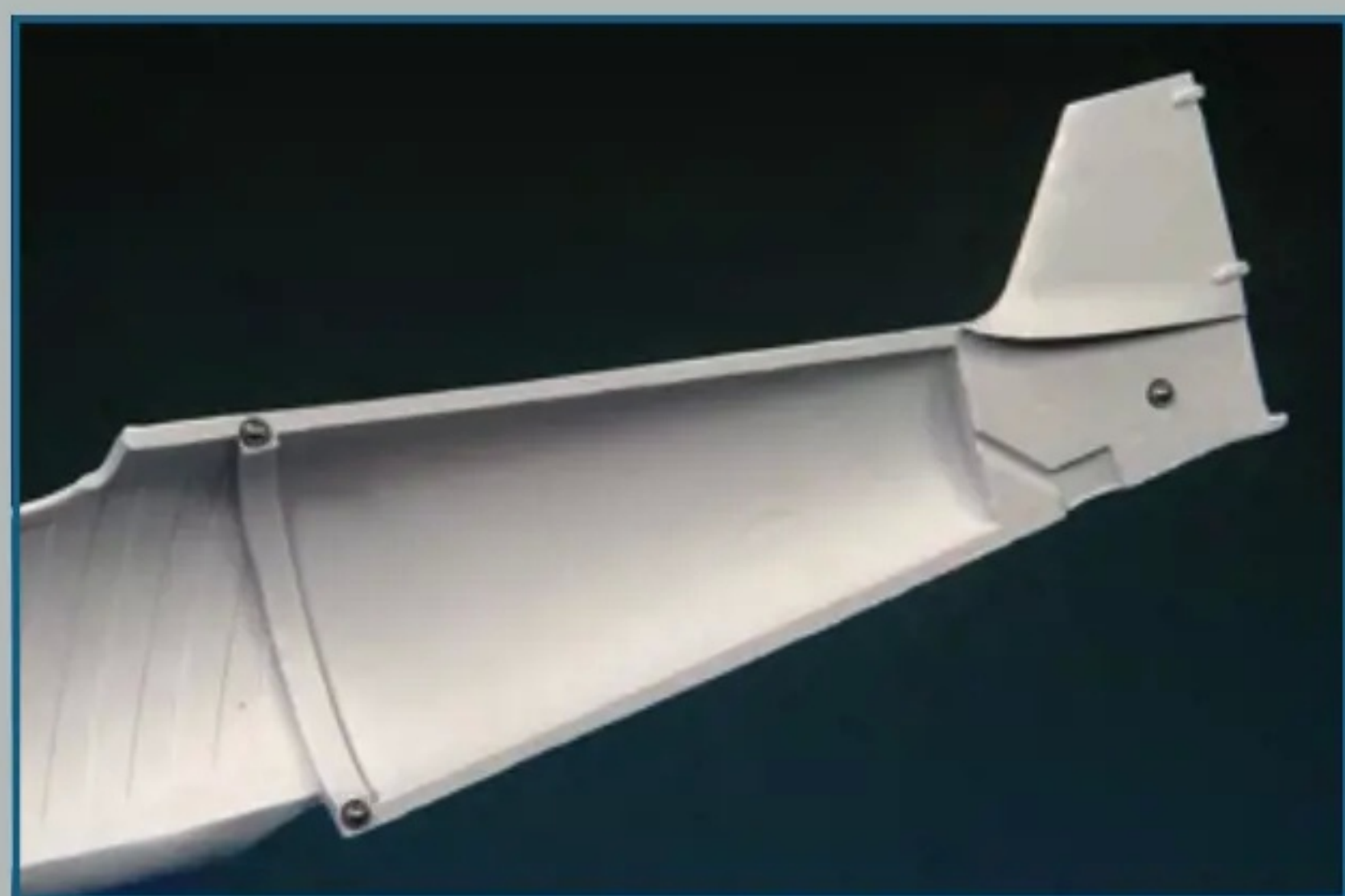
Research (and the instruction guide) calls out the interior colour as being a light grey, as opposed to a green/grey which I've previously relied on for all of my German WWI aircraft builds. Tamiya XF-19 Sky Grey was used to paint the interior walls of the fuselage, and the frame. Any touch-ups were done using an equivalent mix of Vallejo acrylics since they brush on better than the Tamiya paint.

I painted the ammo bin with Alclad II Duraluminum, and used their Polished Brass for the petrol tank and a few of the instrument handles. To protect the paint, I airbrushed ➤



EZ-Line was added for the ignition wires and the spark plugs painted with Vallejo acrylics.

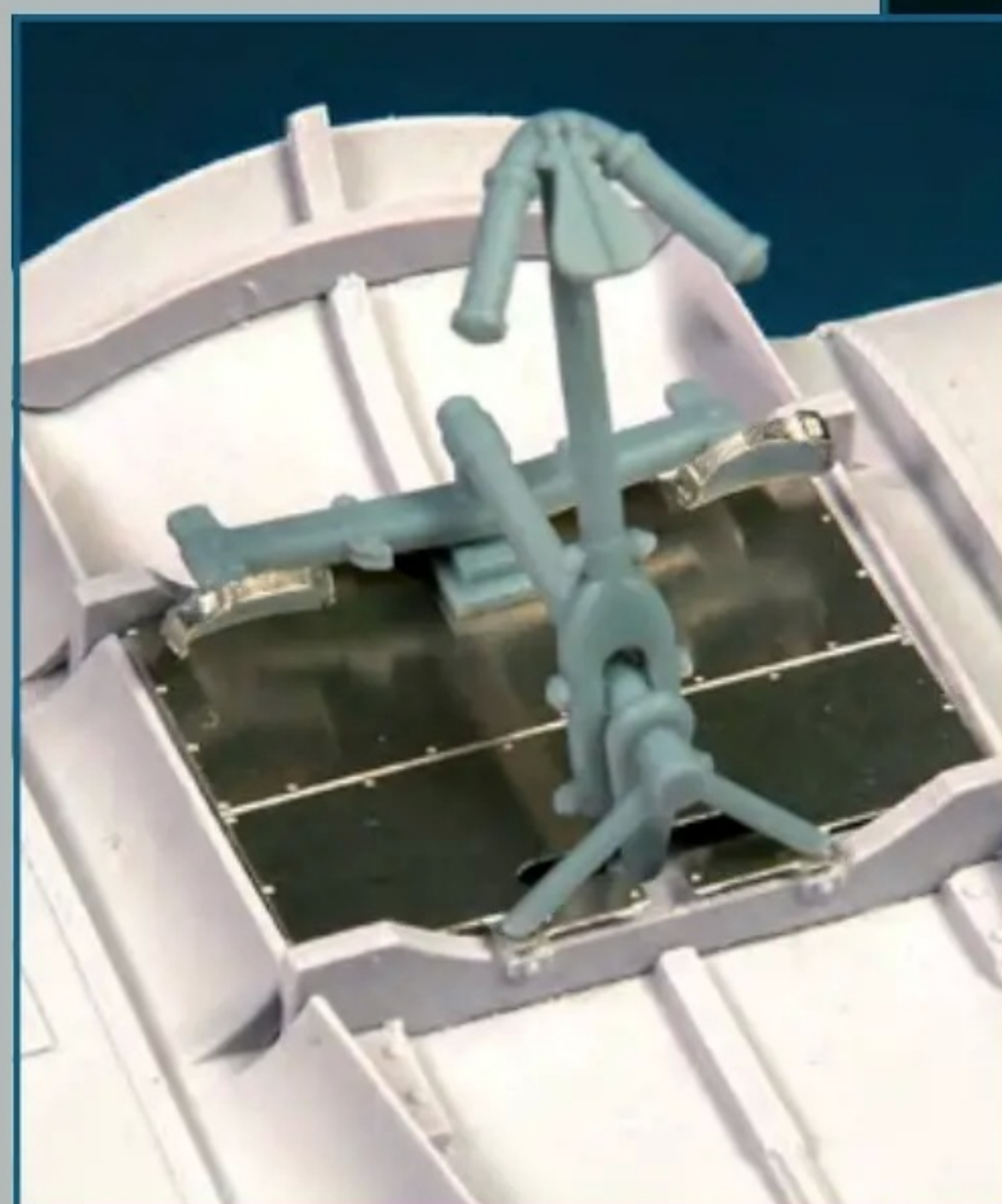




Small ball bearings were supplied to help align the fuselage halves.



The joint at the front of the fuselage was cleverly placed under the location of the right MG.

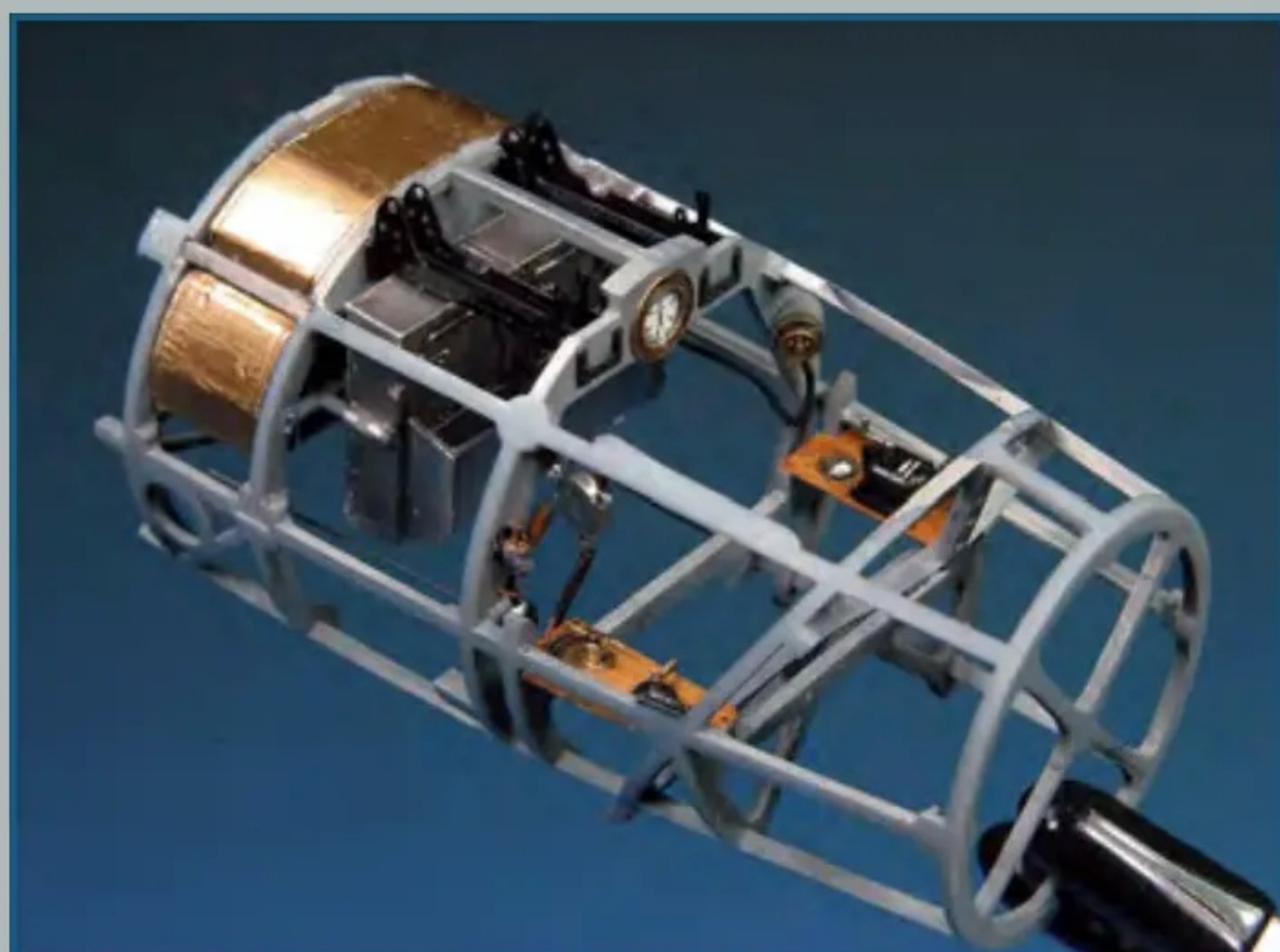


Construction of the cockpit began with the etched metal floor and 3D printed controls.

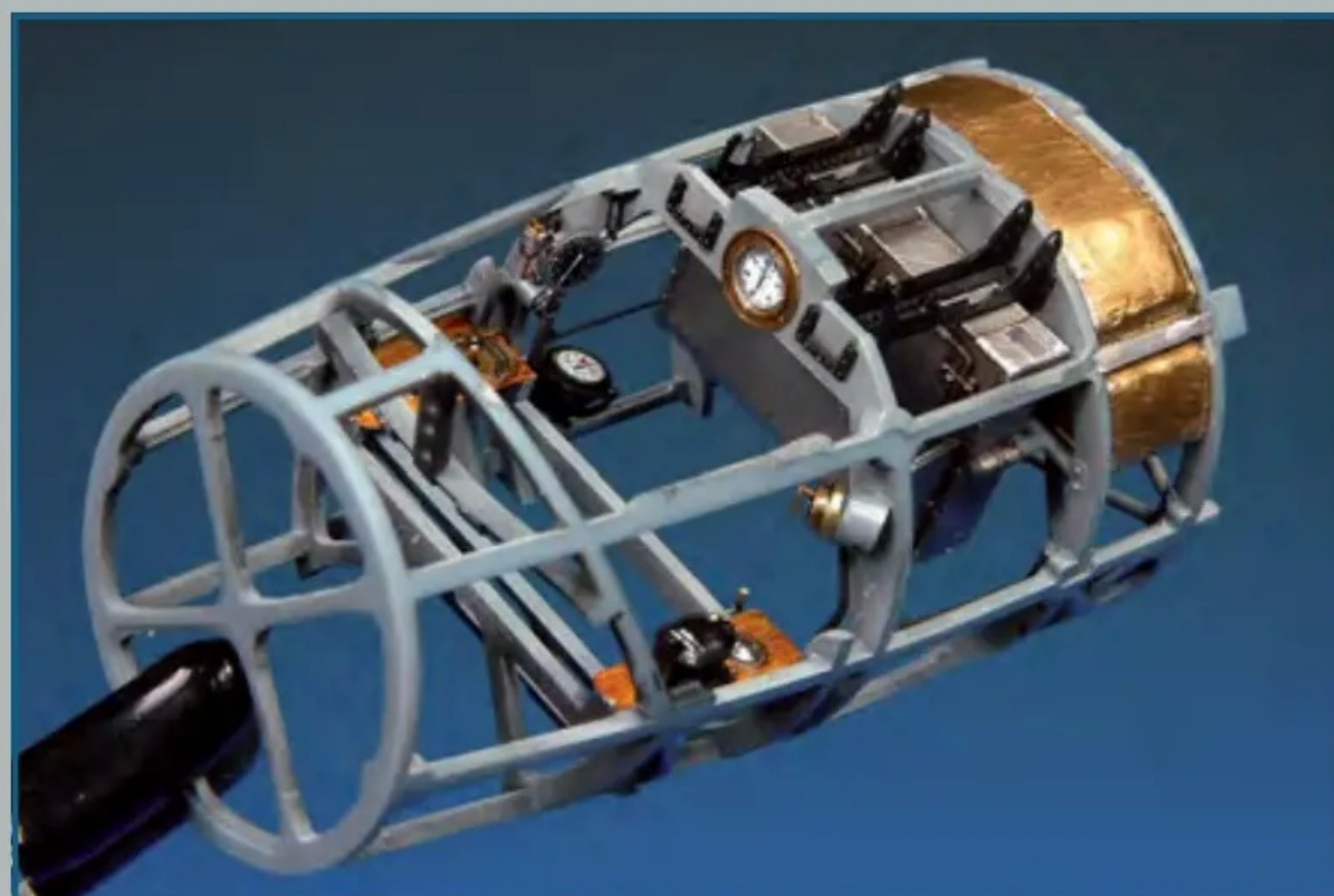
Lengths of stretched sprue were glued in for the rigging. The rib on the rear floor had to be trimmed 2mm back to allow the lower wing section to fit the fuselage.



Springs to suspend the altimeter were made from 0.1mm copper wire, and made rigid with a core and cyano glue before trimming for fit.



Components for the cockpit interior were painted and weathered before being added. The gun mounts here being test fitted, were added after the fuselage was joined.

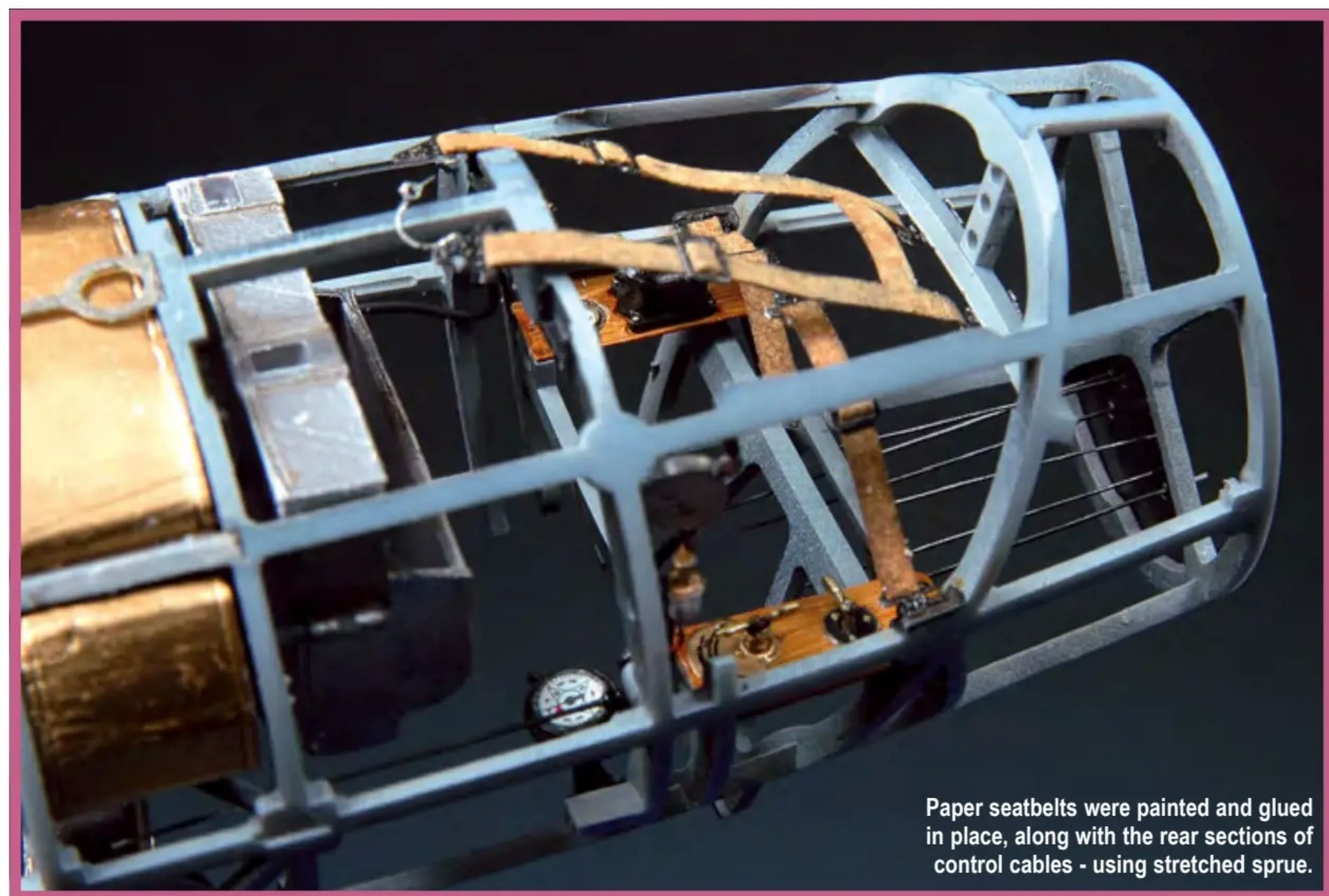


A cable for the magneto and connecting rod for the spark advance lever were added to improve the detail. Etched metal supports for the frame around the petrol tank seemed redundant and were left off.

***"ONE OF THE TRICKIEST PARTS TO THIS MODEL IS THE COCKPIT SECTION, SINCE THE FRAME FROM THE FIREWALL TO BACK BEHIND THE PILOT IS ALL IN ONE PRINTED CAGE..."***

on a couple of light coats of Future acrylic. This protected the surface to get an oil paint pin wash later. A cable was added to the magneto switch using 0.2mm lead wire, and a stretched-sprue control rod to the spark advance lever on the left. The altimeter was held in position using three springs which I made from 0.1mm copper wire wound around a 0.0145" drill bit shaft. The springs were then cemented to a core of styrene stretched sprue soaking each length with thin super glue to hold their shape.

Left and right of the pilot are two small horizontal wooden instrument panels. The etched metal parts for these were primed with Tamiya's lacquer based surface primer, then airbrushed with XF-55 Deck Tan. The panels were then gloss coated using Future floor acrylic and left to dry for a couple of days. A mix of yellow Ochre, burnt sienna and raw umber oil paint was thinned with mineral spirits was streaked on to give a wood grain effect. If the gloss coat had not dried out, the surface may develop small cracks in the



Paper seatbelts were painted and glued in place, along with the rear sections of control cables - using stretched sprue.





The interior walls of the fuselage were painted XF-19 and weathered with diluted oil paint.

finish. After a further drying time, the panels were sealed with Future acrylic.

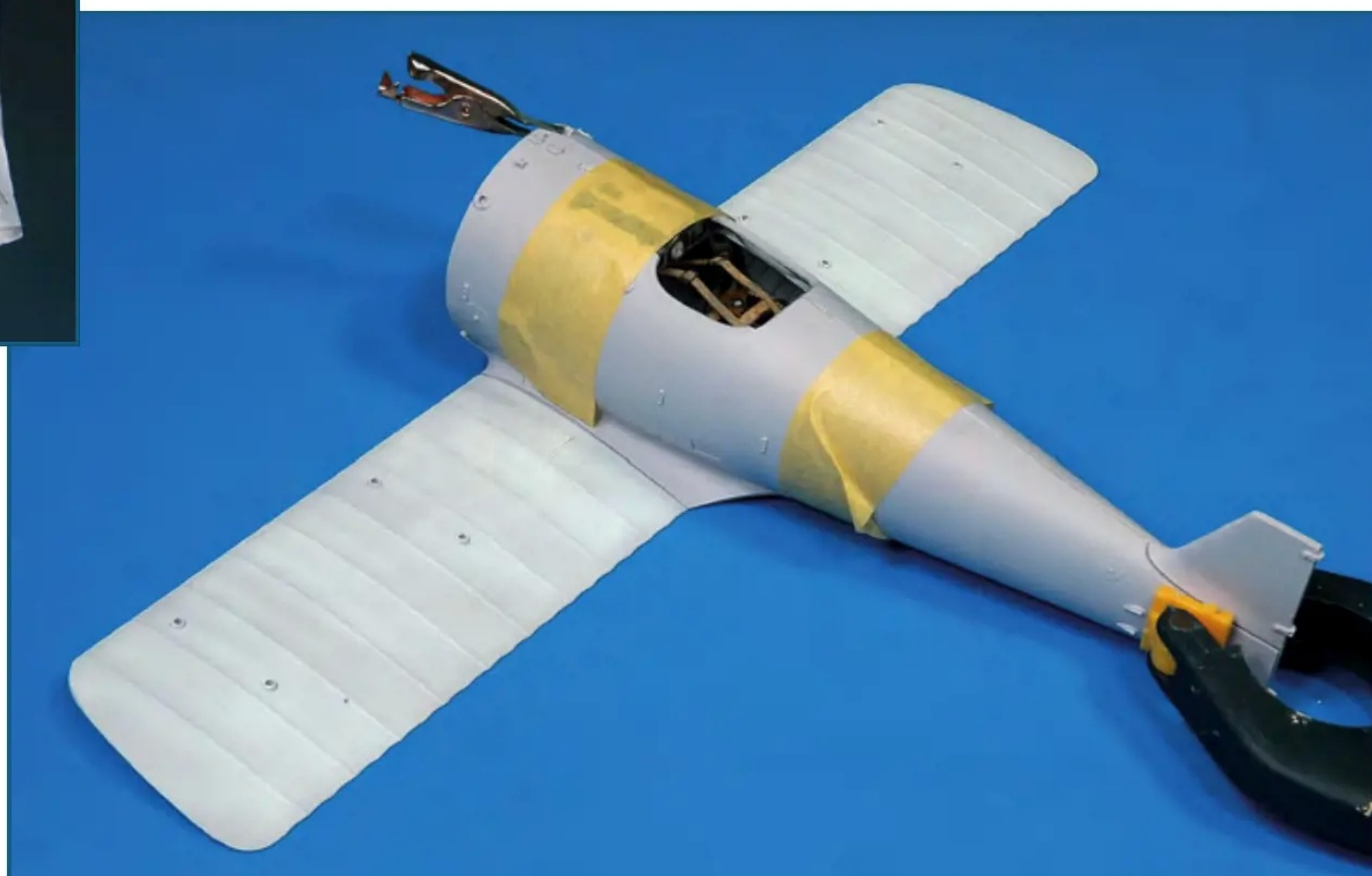
A number of decals were applied to the cockpit interior including instrument faces and labels, but the one for the magneto switch was too tiny to manage and even difficult to see with a microscope, so it was left off. After adding the small handles and magneto crank to the panels, they were attached to the cockpit frame along with the tiny pulsator, altimeter and magneto switch. I added a slight angle to the position of the compass, which sits in a petit frame on the left of the cockpit. With the aircraft sitting nose-high on the ground the compass would level out tipped slightly forward.

Paper seatbelts are provided in the kit, along with the buckles and ends on the etched metal fret. One thing I've noted about the appearance of German WWI aircraft seatbelts in photos is that they appear dark. Some surviving fabric from museums shows some of them even being red in colour. I chose to paint mine with a dark khaki mix of Vallejo acrylics, and airbrushed the metal fittings black. The instruction guide advises to fit the seatbelts to the frame before adding the seat and backrest, which are added after the fuselage halves are joined. The two lap belts were glued to their respective locations, and the shoulder strap assembly was fastened to the cross-beam located behind the seat.

It can't be emphasised enough how important it is to test-fit all components in this build. Unfortunately the etched metal fasteners for the shoulder straps were in the way of the backrest when I later tried to position it, and popped off in the process. I had to add a spacer to lower the fasteners and mount them to the bottom of the backrest. I also shortened how much they protruded toward the seat. Even after all this faffing about the seat and shoulder belt fasteners still interfered with each other slightly. ➔



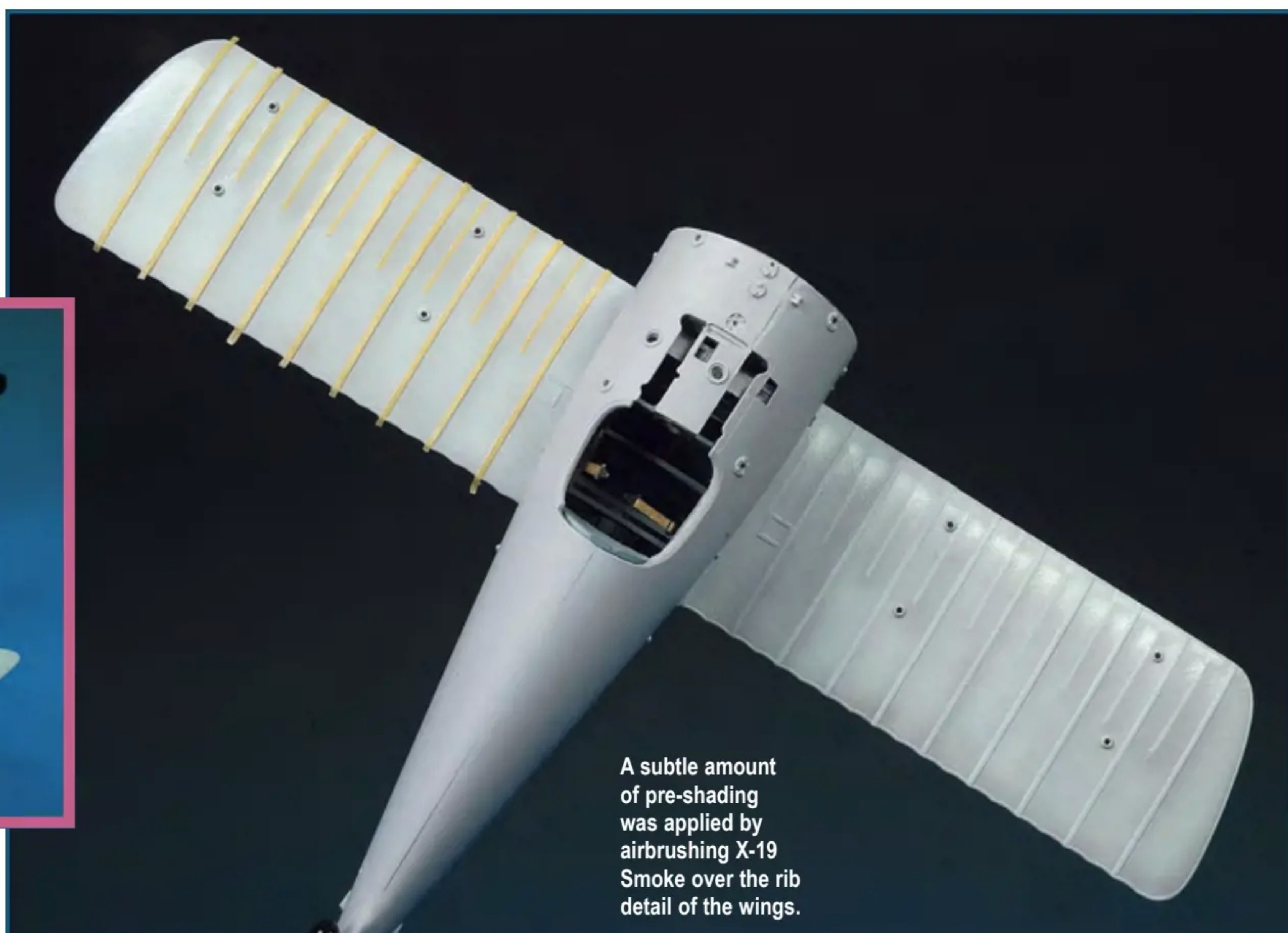
Some persuasion was needed to get the firewall to align straight with the front of the fuselage with no gaps.



After applying quick-setting epoxy glue, the fuselage halves were joined around the cockpit frame and set down on the lower wing section to ensure good fit.



The lower wing section was also glued in place using the 2-part epoxy glue. It was crucial to get the cockpit frame lined up so that the guns and seatback fit properly later.



A subtle amount of pre-shading was applied by airbrushing XF-19 Smoke over the rib detail of the wings.





A polished metal effect was added to the wing detail with Uschi Steel Type powder.



At some point in the construction process, I'd misplaced a small etched metal fitting and after an unsuccessful search, had to make a replacement from thin styrene.



After masking off the cockpit with sponge, the fuselage was painted with a mix of XF-16 Flat Aluminum and XF-19 Sky Grey.



The elevators needed about 1mm removed where they meet the fuselage since they didn't line up properly with the horizontal stabilizers once they'd been set into their recessed locations.



Rather than use the kit supplied decals, the dark areas under the forward fuselage were masked and sprayed with NATO Black.

## ◀ FUSELAGE

Test-fitting the cockpit frame in the fuselage halves had to be done by also coupling it with the lower wing. Aviatic's guide and Nigel's build review reiterated the need for ensuring a good fit since the danger of pushing negative dihedral on the lower wing was a possibility. Also, the frame had to be positioned dead centre so that the gun mounts would align with the openings in the fuselage.

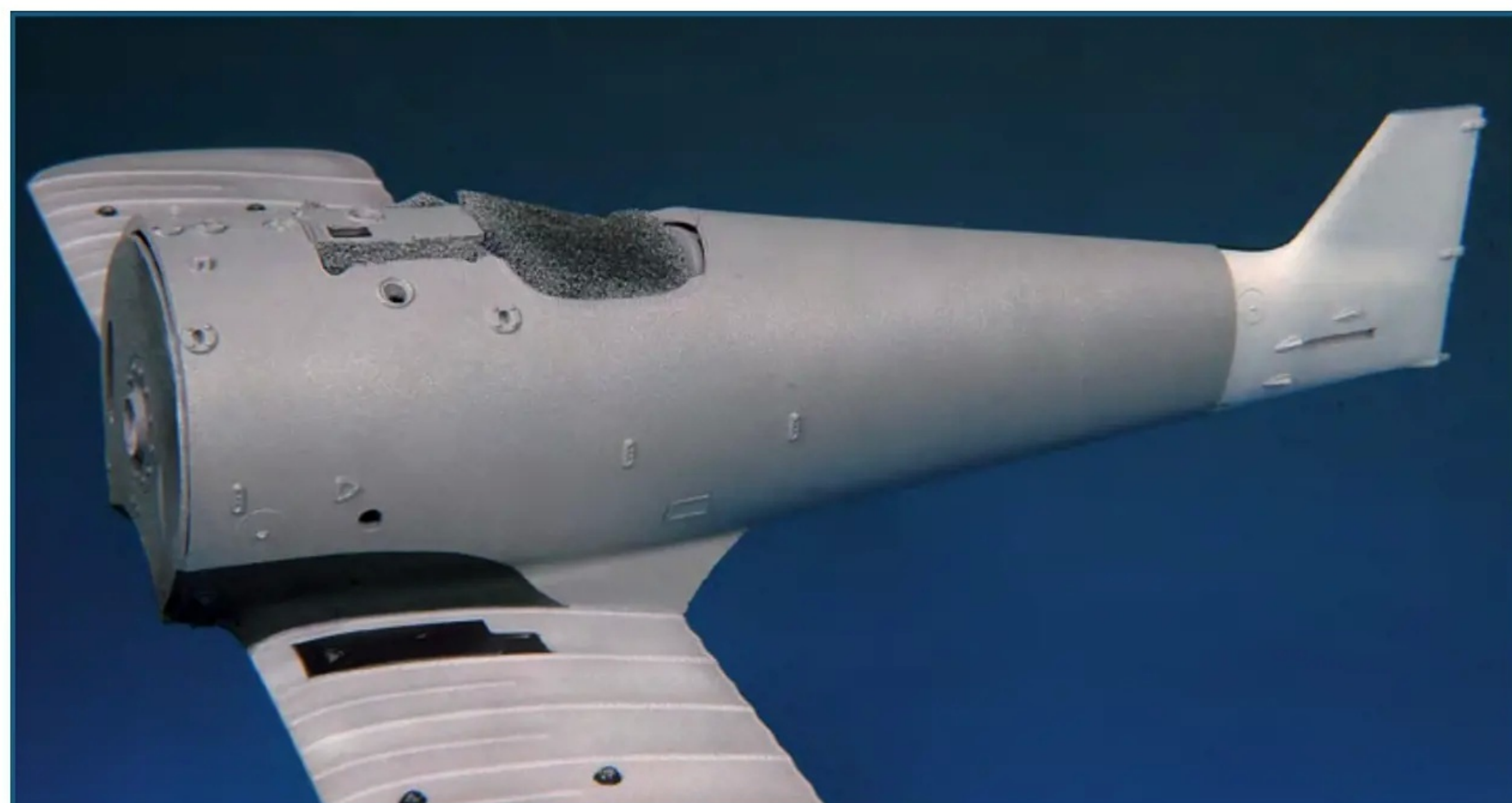
A novel feature of the kit included small ball-bearings that sit in three recessed holes, allowing the fuselage halves to align nicely. I added a small drop of super glue for each one, securing them to the right half while testing the fit of everything. After placing the frame inside one fuselage half, it was tacked into place with super glue, and the other fuselage half was glued into place using carefully administered beads of 5-minute epoxy glue. Taping the fuselage together and clamping it around the tail ensured it stayed aligned until the glue set, which is actually a lot longer than 5 minutes. I placed the fuselage assembly into position on the lower wing without cementing it to ensure a good fit with no interference of the flat dihedral. At the rear of the cockpit floor there is a rib extending to the back, and I had to trim 2mm from this to allow proper fit of the fuselage to the lower wing. After the glue for the fuselage assembly was dried, I then used more epoxy glue to

secure it to the lower wing. Some of the epoxy glue was also added to the outside of the frame to ensure it didn't come loose after being sealed up in the closed fuselage.

The firewall (with what I assume is an oil tank) was painted and epoxy-glued in place. I did paint the oil and petrol tanks but in retrospect shouldn't have bothered since they're completely hidden from view on the finished model. There was very little gap filling to do on the model after the lower wing and

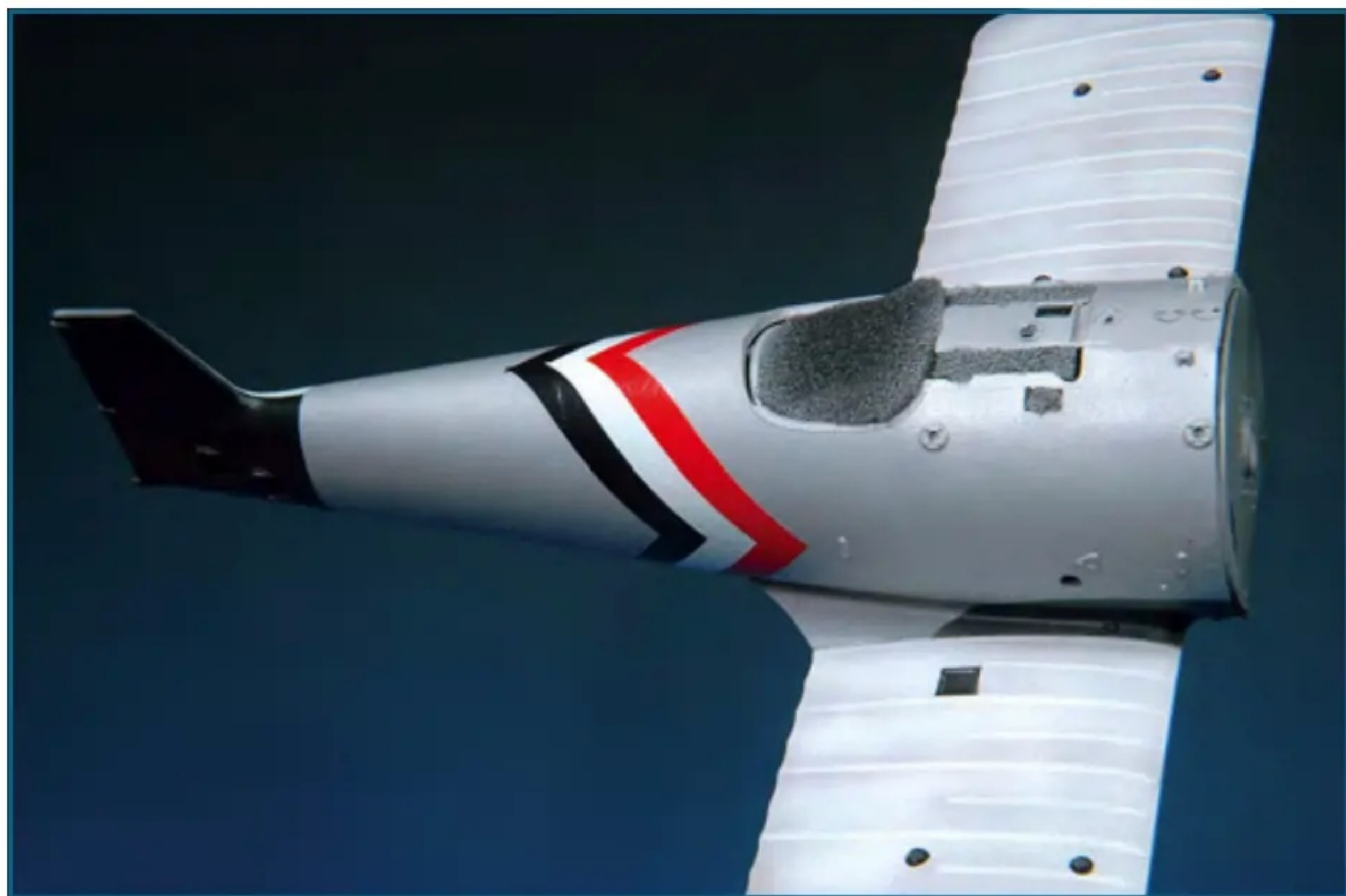
fuselage had been joined. Magic Sculpt epoxy putty was used to fill the gap on the left side of the vertical stabilizer, and a small amount used under the fuselage where it joins the wing section.

To ensure all was smooth after sanding the joints I masked the cockpit with pieces of soft sponge, then airbrushed on Tamiya surface primer. Any imperfections were sanded down and polished after study under good lighting.



The tail was masked and sprayed with the Jasta "Boelcke" pattern of black and white.





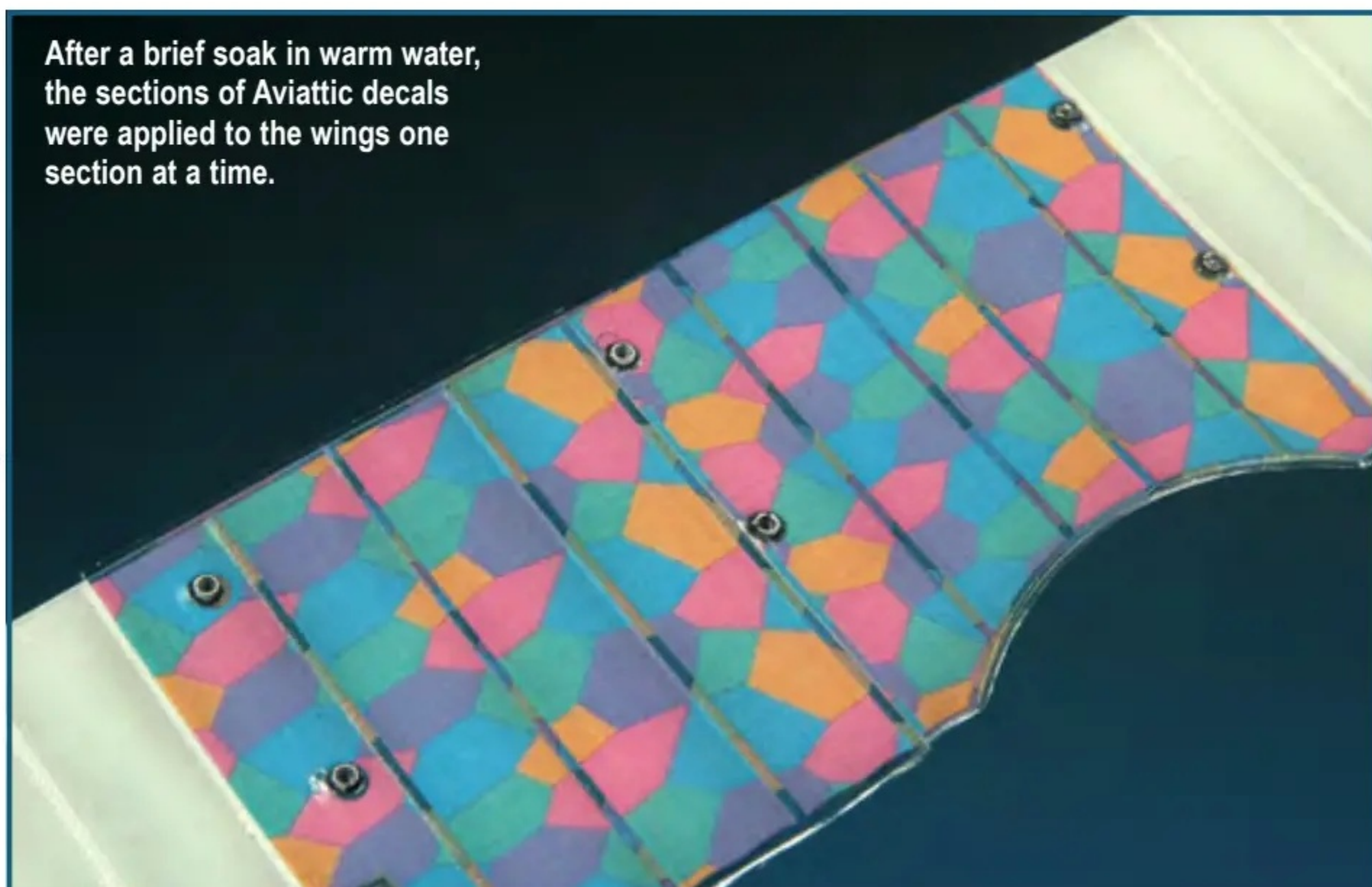
The distinctive chevron markings consisted of two decals which needed to be lined up at the top and bottom of the fuselage.



The engine was glued in place, and also the pilot's backrest. Putty was added to the backrest to allow a continuous look to the fabric of the cockpit opening.



The printed Gaspach MGs are finely detailed.



After a brief soak in warm water, the sections of Aviatic decals were applied to the wings one section at a time.

## PAINTING

Since the kit is supplied with 5 colour lozenge decals for the upper and lower wings, the surfaces have to be prepared by spraying them gloss white. Tamiya's X-2 Gloss White was airbrushed onto the wing sections prior to the lower one being attached to the fuselage.

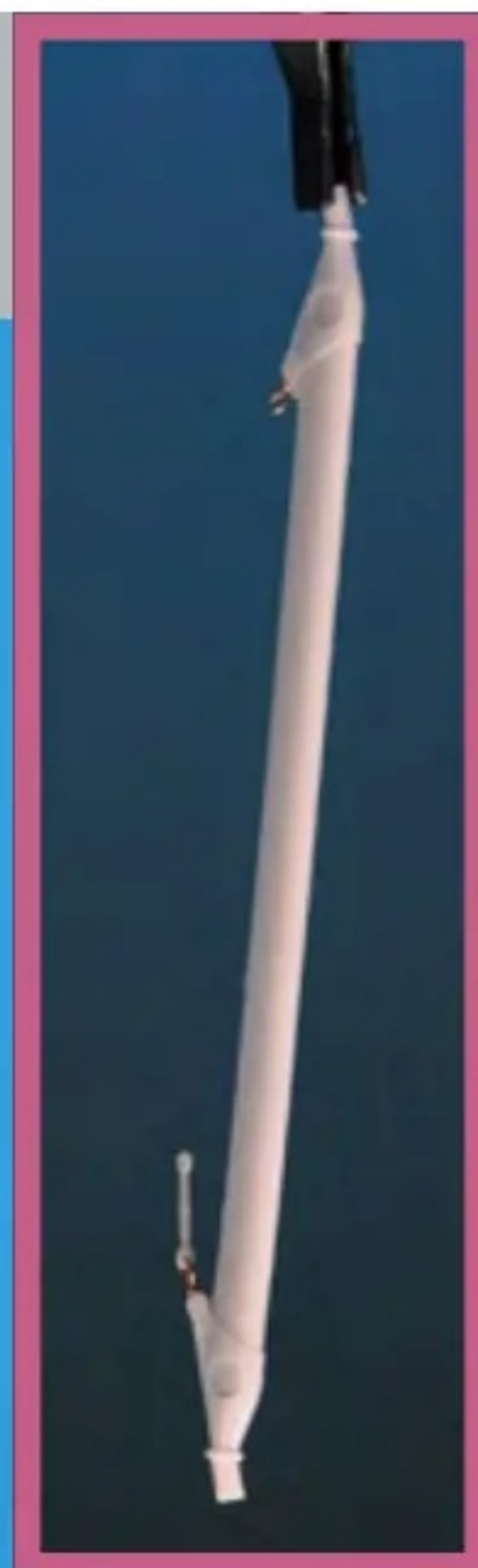
After masking the outline of the ribs with very thin strips of Tamiya tape, I airbrushed on a very small amount of X-19 Smoke to give a pre-shade. The decals are quite transparent and I didn't want to overdo the effect. I then masked and airbrushed the metal panels on the tops of the lower wings with XF-1 and brushed on steel Uschi metal powder. The fastening points for the struts in the upper and lower wing sections were painted flat

black since this was evident in period photos. This was all sealed with Future floor acrylic since the lozenge decals need a very glossy surface to adhere and minimizing any slivering.

The fuselage was then painted "Silbergrau" which was a typical colour for Pfalz aircraft at the time. I mixed XF-16 Flat Aluminum with XF-19 Sky Grey using a 1:1 ratio. This was sealed with Future to protect the paint and also prepare for decal application.

There are three large dark grey decals provided for the lower front of the fuselage aft

of the engine cowling, but I decided to paint these sections. After masking off the area with help of a curved template from the decal, it was airbrushed with XF-63 German Grey. The tail section was masked off to paint the distinctive black/white pattern of Jasta "Boelcke", and I used XF-69 NATO Black and an off-white mix for that. At this point I painted the engine cowling separately using those two colours. ➤



The struts were carefully drilled out to accept the rigging terminations of a turnbuckle at the bottom and a loop at the top.

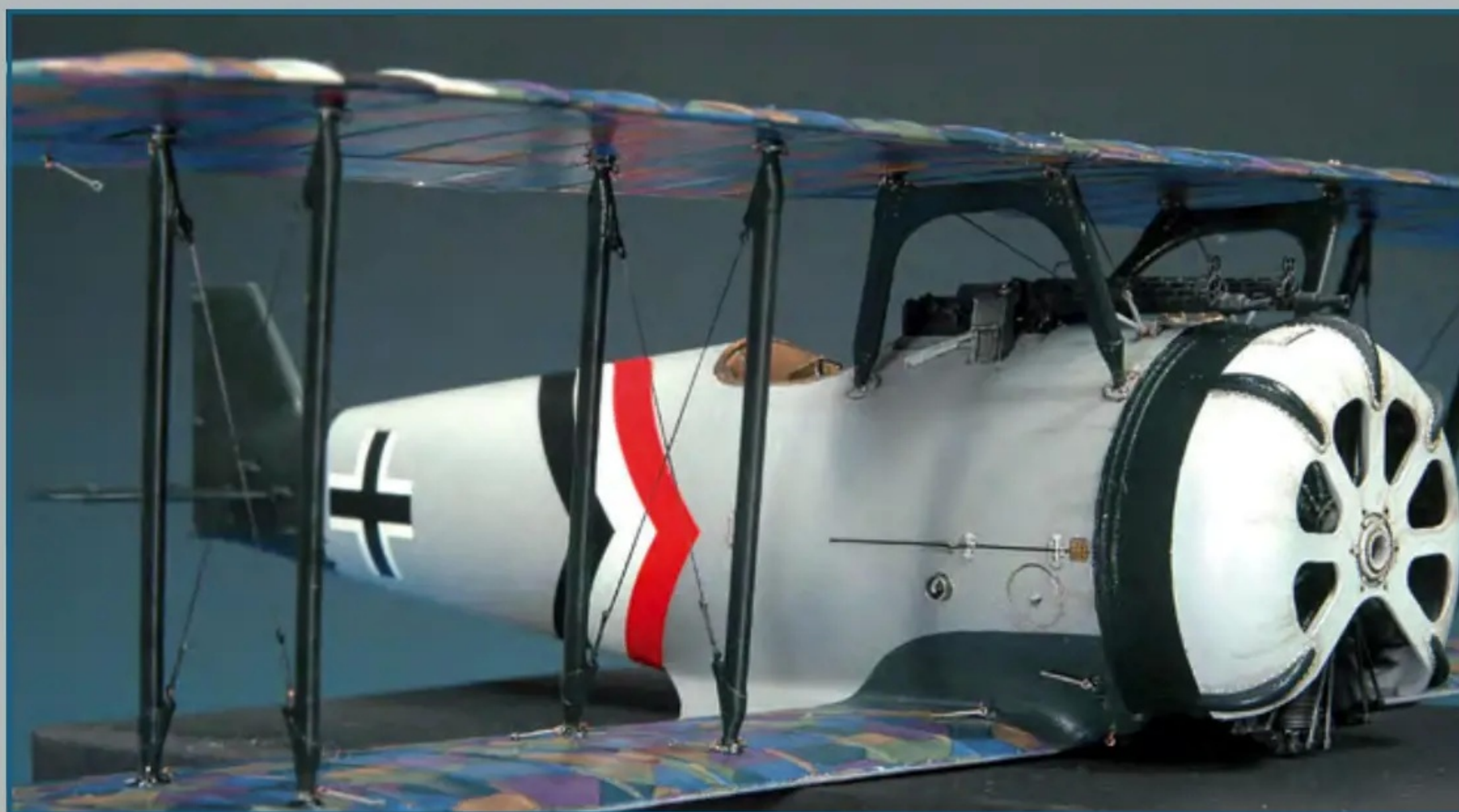


After the upper lozenge decals had been added, swivelling turnbuckles were glued into position. The cabane struts were first cemented into position before adding the upper wing.





The engine cowling was actually glued in place before adding the guns, which would have interfered with any gap filling later - which thankfully wasn't necessary.



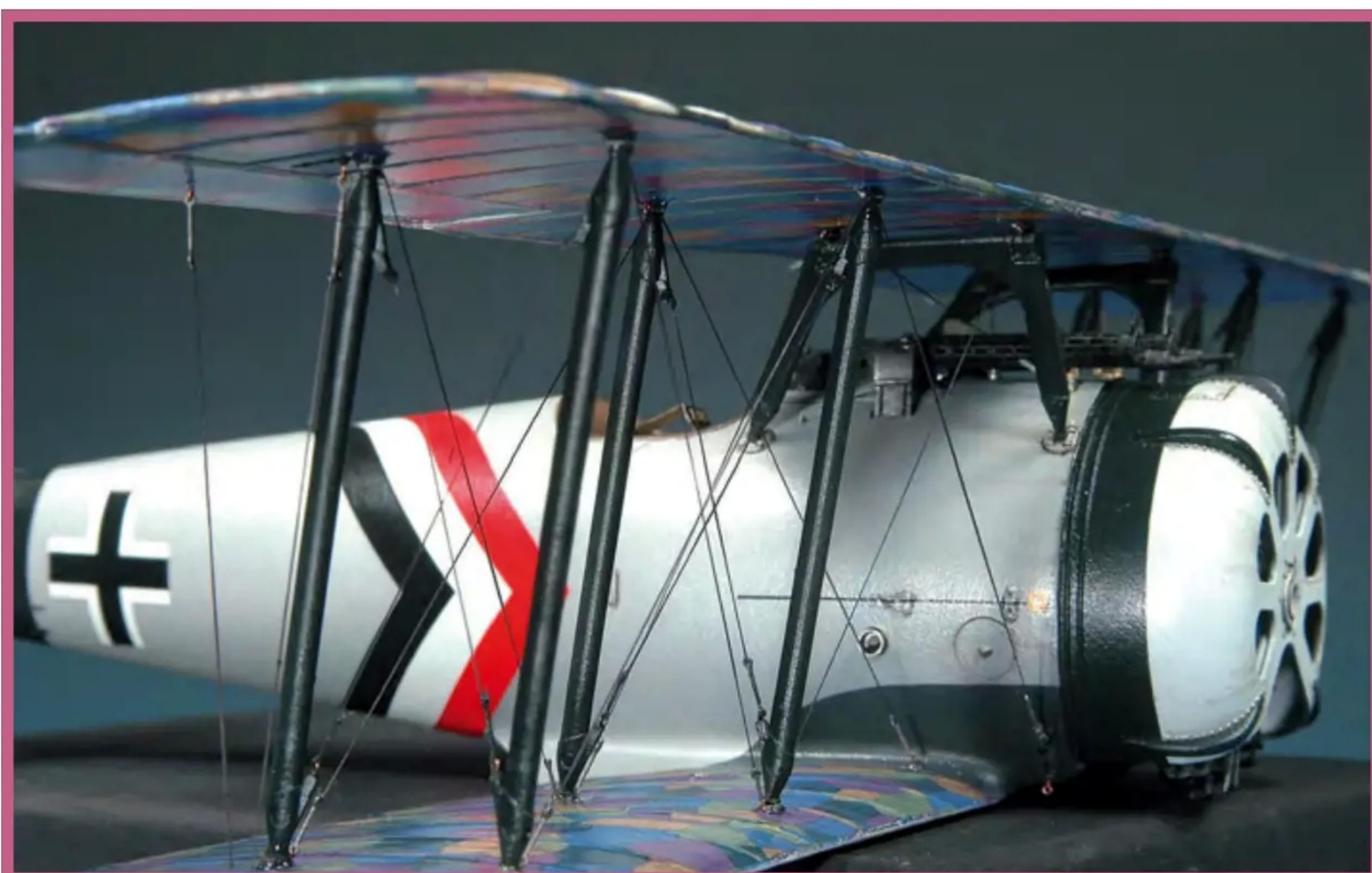
One all of the struts had been added, the rigging commenced using EZ-Line.

At this point I needed to decide how to continue, and what was the most important finish not to muck up. Since the lozenge decals are delicate and don't take well to masking in my experience, I chose to add the tricky red/white/black chevron decals to the fuselage first. They had to be perfectly lined up on the fuselage with a minimum of adjustment, and I'd seen a previous build to this where the modeller had obviously painted on his chevrons...so what problems had he ran into??

To help the placement of the chevrons, I cut off the small fastener details from the surface of the fuselage with the intention of gluing them back over top later (which I didn't bother doing). This would allow the decals to better slide into place, and need not have to conform over the fastener. Using plenty of warm water to aid the application and subsequent positioning, I worked with the two chevrons and tried to line them up top and bottom on the fuselage. Luckily all worked out and there was just one small overlap near the back that was easily removed, and a small touch of black paint needed to match the upper join. With this accomplished I added the rest of the fuselage decals and when thoroughly dry, sealed them with Future. The screen printed markings were very good to work with fine resolution and thin film. And the kit supplied a lot of spares, especially the tiny stencils.

Next was to get the pilot's back rest and seat installed. As mentioned previously, fitting the backrest into place popped off the shoulder harness assembly as it pressed into the crossbeam support at the back. After modifying that, the straps were re-applied and the seat dropped into place. The area where the backrest mates up with the fuselage and padded edges of the cockpit had to be blended with a fine bead of epoxy putty. The fabric or leather used on these aircraft appeared quite dark, so I painted them in a darkish brown and tried to highlight things a bit with touches of a slightly lighter shade.

Rather than leave the engine & cowling until the last steps as the instructions suggest, I chose to do it before setting the guns into place, since work may have been needed at the firewall depending on the fit, and the guns would be in the way in that case. My engine sat a fraction low for some reason, but by tweaking the position of the cowling, I was



The struts on this aircraft appeared dark in period photos, and so were painted black as opposed to the light grey in the instruction guide.



Turnbuckles for the control lines of the tail section were added using 1:48 Gaspach cast metal type "C".



The rudder and elevators were glued in place with epoxy glue, giving better strength to the joints than using just cyano.

able to align it nicely without having any gaps or offsets. Again, the use of the epoxy glue helped form a strong bond with the delicate thin cowling.

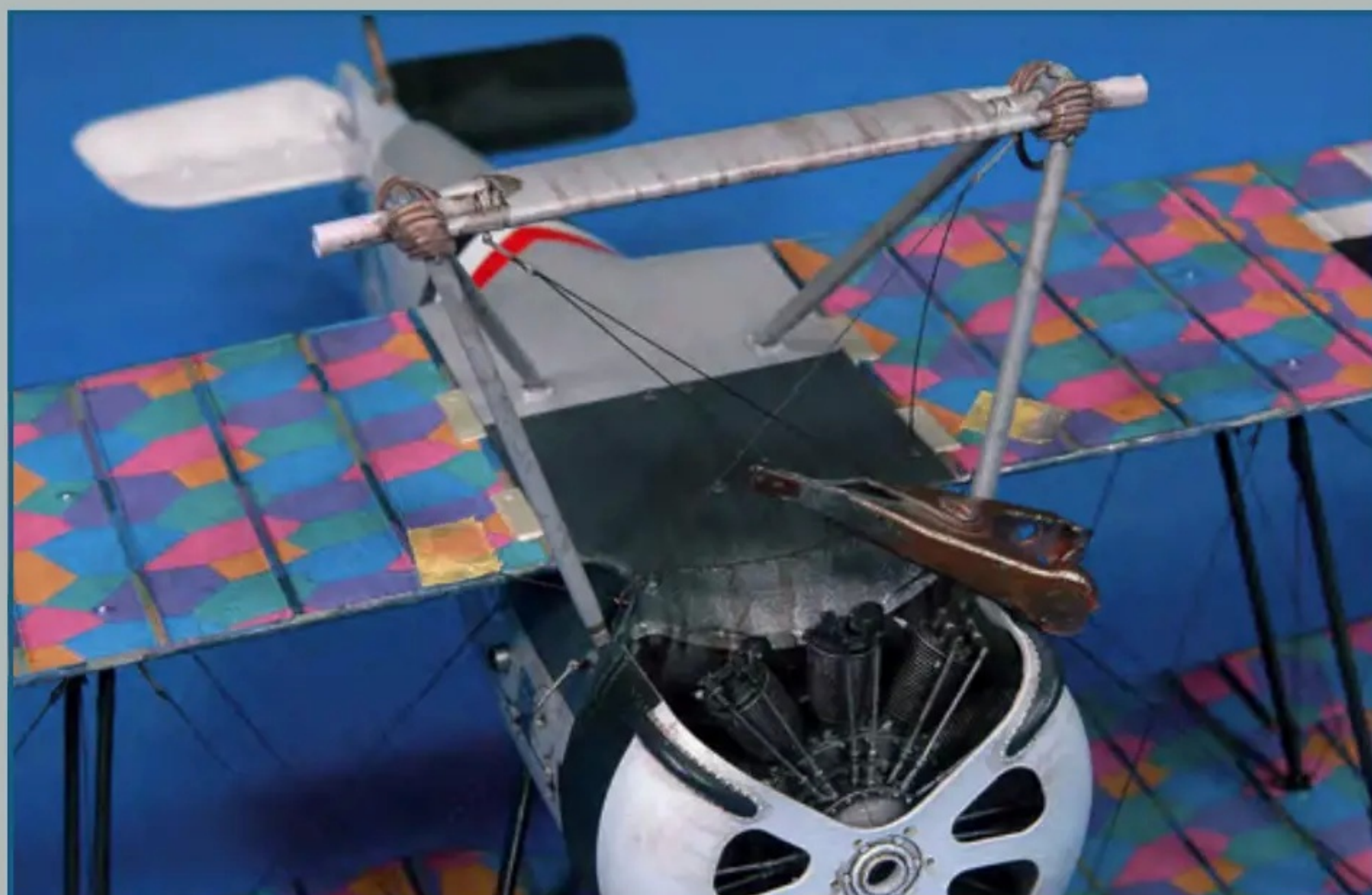
The placement of the guns and their mounts went well until I missed adding the etched metal heat deflector panels BEFORE glueing the ammo feed/belt ejection chutes in place. These small panels are shown in the instructions out of sequence, but I should have figured the correct order in which to manage it. Troublesome surgery was needed to correct this which is beyond description here due to space constraints.

## DETAILS

The struts of Bäumer's aircraft appeared quite dark in the period photos I'd seen, and so I painted them using XF-69 NATO Black. This also eliminated the tedious effort of placing all of the tiny labelling decals on them.

Two types of four-blade propellers are provided in the kit; Wotan, and Imperial. This aircraft had the latter, consisting of two elements bolted together which the kit replicated with cast resin. After painting the blades with a dark brown acrylic mix, lines to create a lamination effect were applied using very thin strips of masking tape to try and





The last section of rigging was on the undercarriage, showing the line secured at one end with tape, and tension pulled with a copper clip - during which a tiny drop of cyano was applied at each end.



Oil stains were added to the cowling, along with some random paint chipping with Vallejo dark grey acrylic.

match the patterns evident in the clear photos shown in the instructions. Tamiya's XF-55 Deck Tan was airbrushed on, and after the tape was removed the blades were airbrushed with Future. The hub was masked and after airbrushing it with XF-1, I brushed on some Uschi Steel type polishing powder. This was also sealed with a gloss coat before applying the markings. I used some spare Wingnut Wings decals for the propeller since they had a slightly better definition and size in my opinion.

When the wheels were assembled there was a notable gap between the wheel and tire, so I ended up filling it with epoxy putty before painting them up. I chose a light grey for the tires since they tended to be lighter in references. A light wash of oil paints was added to the details after painting them, and I also dusted them with earth coloured pastel chalk dust.

The printed undercarriage legs were beautifully detailed, and fit the cast resin axle well. The subassembly mounted to the holes in the fuselage with just a slight shortening of the location pins, and provided a stable mount. I used epoxy glue to mount the legs, and set the model on the gear with the wings supported level to maintain alignment while the glue set.

## LOZENGE DECALS

Beginning with the underside lozenge decals, they were carefully trimmed from the paper with the strut locations carefully removed in the case of the upper wing. They were then soaked in warm water for just a few seconds. To ensure the adhesive didn't get too diluted, they were placed onto the wing sections with a minimum amount of water, trying to position them with the least amount of movement. I used a wide paintbrush to push out any air

and water trapped under the film, and pushed down on any of the detail they needed to conform to. When totally dry I trimmed off the excess with a brand new #11 blade, and I ran a damp brush along the edges soaked with Tamiya's X-20A thinner. This helped adhere the film at the perimeter.

The upper lozenge decals were cut leaving a slightly wider border, so that the film could be wrapped over the edges of the wing. Again, access and walking panel sections along with the strut locations in the lower wing were removed cutting them with a sharp #11 blade, and the above process repeated. After the decals had completely dried, the overhanging film was gently teased over the edges using the X-20A as a softening agent. Care was taken not to over-apply this, since it can destroy the print colours of the decal. The decal surfaces including the wrapped edges were then sealed with Future gloss acrylic.

## TURNBUCKLES

The kit provided a set of beautifully printed resin turnbuckles, especially designed for this model by Gaspach. The instruction guide called out the various types for the different locations to rig the wings and control lines. My preference for rigging has always been to mount the turnbuckles using copper loops so that they can pivot into alignment when the rigging lines are pulled straight through another loop at the far end. I also prefer to use Gaspach 1:48 scale turnbuckles since they appear to me more realistically sized when I study period photos.

To make the mounts, I took 0.1mm copper wire and threaded it into one end of the turnbuckle, and twisted the ends with tweezers leaving enough slack so that the turnbuckle could swivel freely. For the termination loops

at the opposite end, I wrapped the copper wire around a 0.0145" drill bit shaft. The copper twists were trimmed off leaving enough length to be glued into the pre-drilled holes. I drilled out the locations for mounting them using a 0.0145 drill bit, taking care especially on the 3D printed struts not to crack the brittle material. Just behind the cowling under the two MG's are a couple of double-turnbuckles for the cabanes, so these were wrapped with one mounting loop per pair.

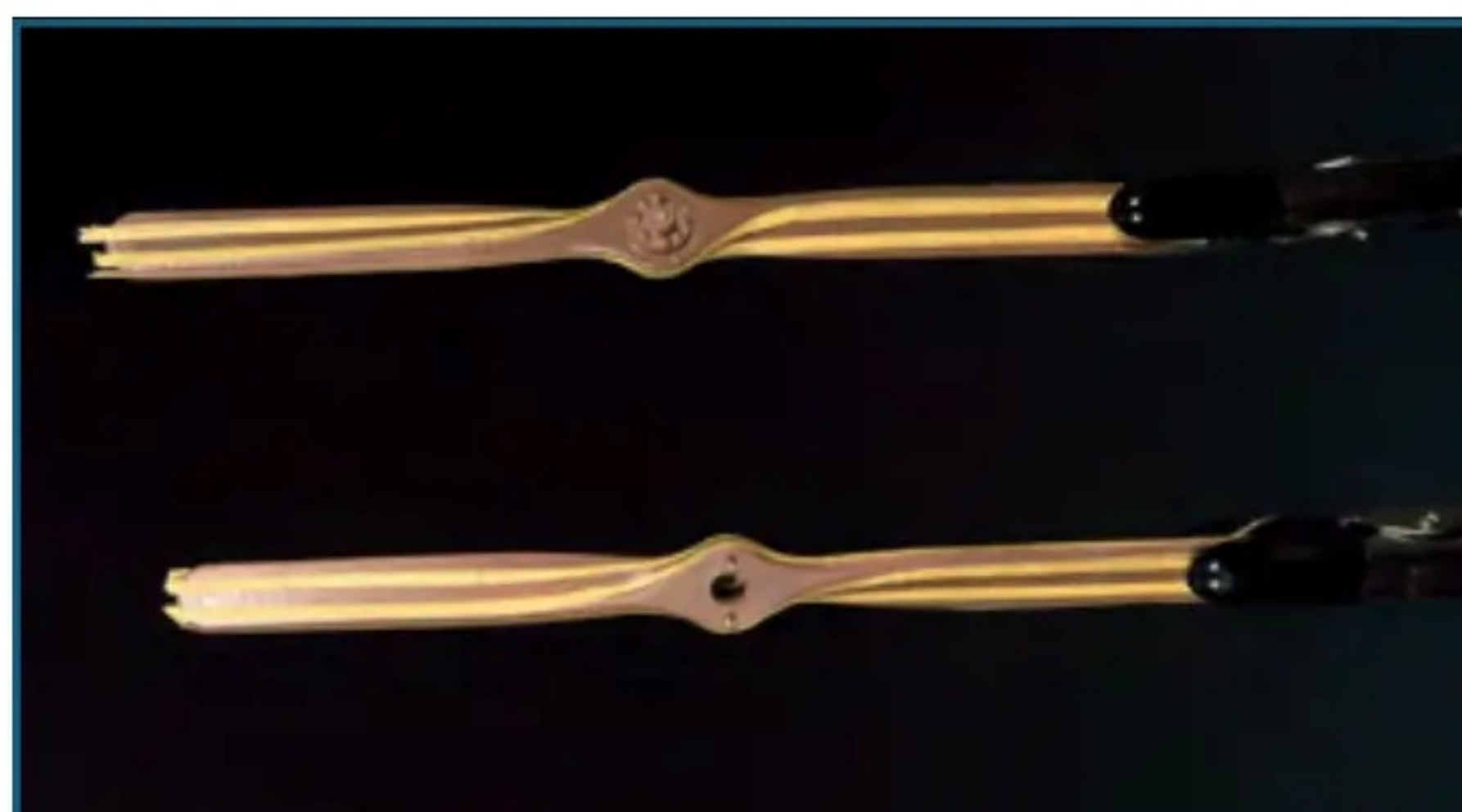
## MOUNTING THE UPPER WING

One of the biggest challenges of making model biplanes is mounting the upper wing. Thankfully this model was extremely well engineered to make this task relatively painless. There are four different types of struts (excluding the cabanes) for the model, clearly labelled and quite distinctive if you study them closely. They are labelled LF, LR, RF, and RR with the explanation of orientation looking from the front, which seems unconventional. Just to make things less complicated and not mix mine up, after separating the struts from their labelled runner I placed the different types in a four-place marked egg carton.

The wing struts on Pfalz aircraft had an angle to them that leaned outward from the vertical, so the mounting pins are correspondingly angled. I made sure that after my turnbuckles and fastening loops had been glued into place on the wings that the ➤



Magic Sculpt epoxy putty was used to fill the gaps on the outsides of the wheels.



The two propeller sections were painted dark brown and lamination lines were masked using thin strips of tape.



After airbrushing on a lighter colour, the blades were given a woodgrain look using oil paint, and markings applied.



◀ strut sockets were clear by gently reaming them with a 0.40" drill bit. All of the struts were fit-tested to ensure they bottomed out with no restrictions.

Beginning with the cabane struts, they were placed into position in the fuselage, and after setting the top wing in place for alignment, I ran thin super glue into the four fuselage mounts. These points were followed with a small amount of epoxy glue afterward to strengthen the joints. Once the adhesive had dried, the upper wing was similarly glued into position on the cabane struts in the same fashion.

Working from the inside outward, the individual wing struts were cemented into position again with a touch of super glue followed with a tiny amount of epoxy. Only one issue came up when I was forcing down on one of the outer struts and the pin snapped off with the stress. Since the alignment of the whole assembly was straight, it was no problem to bond the break with the two adhesives.

## RIGGING

Recommended by Aviattic and other top modellers, some of the best rigging material is the type made by Model Kasten in Japan. Eager to try this, I visited The Aviattic website under "Store" only to be bitterly disappointed to see "Out Of Stock". No matter, I still had plenty of EZ-Line to complete the model.

Taking measured sections and threading it

through the turnbuckles and termination loops, I secured one end with a small piece of tape, and pulled tension at the turnbuckle end with a copper clip. As the tension was applied, I ensured the turnbuckles were correctly aligned before adding a tiny drop of super glue at each end of the line. After a 15 minute wait, the excess line was trimmed off with a brand new #11 blade (I used quite a few on this build). Getting the cabane strut rigging done was difficult due to the space limitations, but the wings went straightforwardly.

Before gluing the horizontal stabilizers into their positions, the left and right elevators had

mineral spirits.

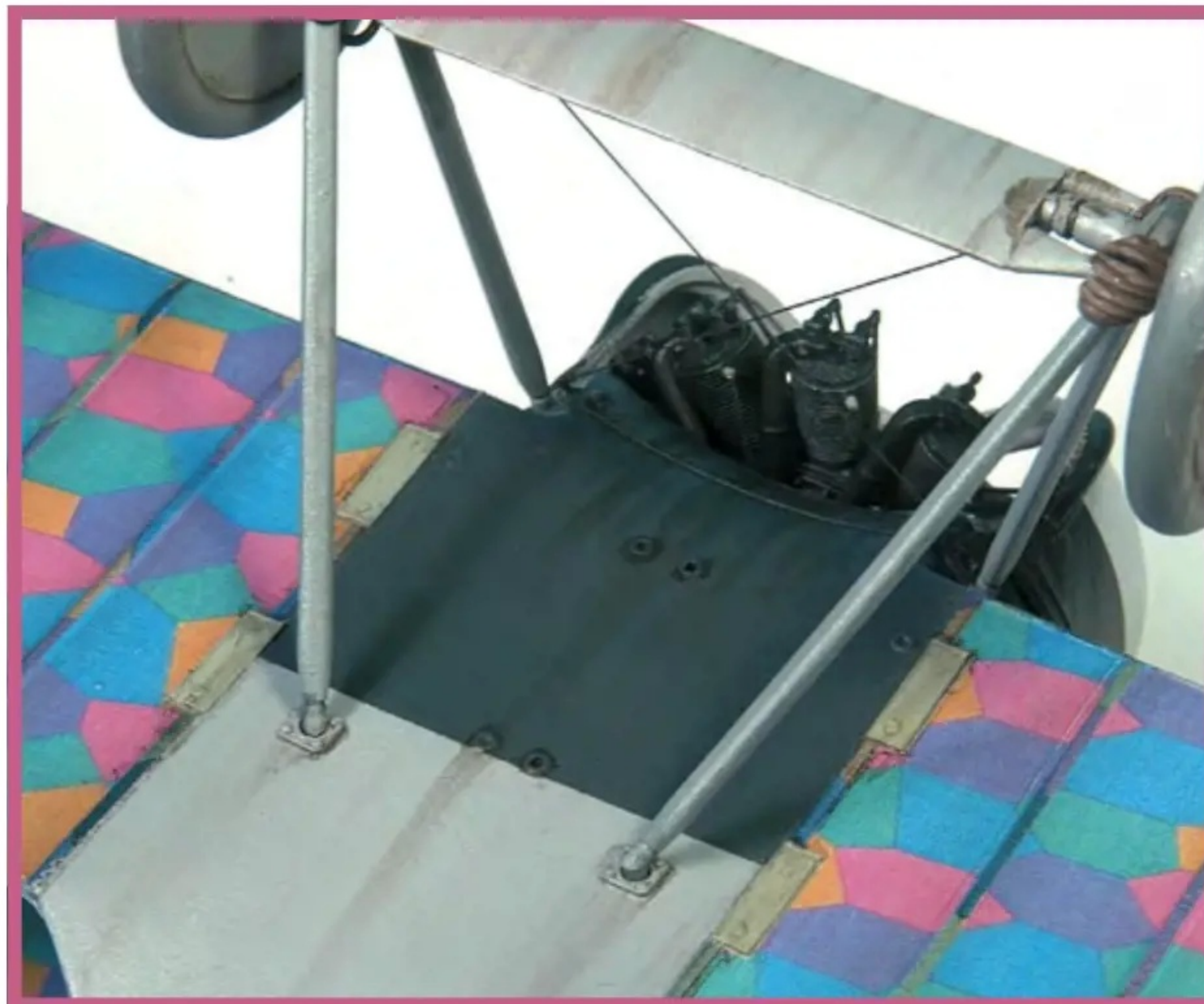
Some areas received a fair bit of oil paint wash, like behind the engine and undercarriage axle, where a lot of engine oil would accumulate. Scratches to the paintwork were applied with a fine-tipped brush using dark grey acrylic.

To tone down the shine of the surfaces, I airbrushed a light coat of Vallejo Matt Medium over the model. I focused this on some of the more glossy elements like the markings and lozenge decals. The Vallejo Matt Medium was just thinned with tap water to the consistency of skim milk for spraying.

to be trimmed where they meet the fuselage by about 1.0mm to fit the tabs. They were the same length as the stabilizers - which are counter-sunk into recessed location slots. The control lines were then rigged with EZ-Line. The final bit of rigging was done on the landing gear after attaching it.

## WEATHERING

Since the model was painted and assembled in stages, weathering was applied throughout the build. I prefer to add dark oil paint washes to most details, and protecting the paintwork with acrylic gloss (either Future or X-22) which protects the surfaces from the harsh effects of mineral spirit based black/raw umber oil paint mixes. After applying these washes, I typically wait an hour or so, then blend out any of the tide marks with a soft, brush dampened slightly with the



Some light weathering was added after of the engine with a mix of diluted black and raw umber oil paint.



A small etched metal chain from Aber was glued onto the magneto switch, and small paint chips added close to the cockpit.



The seat belts were placed leaving the one end dangling over the side, as seen in many period photos.



Additional oil stains were added to the undercarriage axle fairing.





The resin figure of Paul Bäumer included in the kit.

The figure was first airbrushed with Tamiya's black and then field grey for the uniform before the detailed painting using Vallejo acrylics.

Small lenses for the goggles were made from punched acetate, adhered in place with Future acrylic.



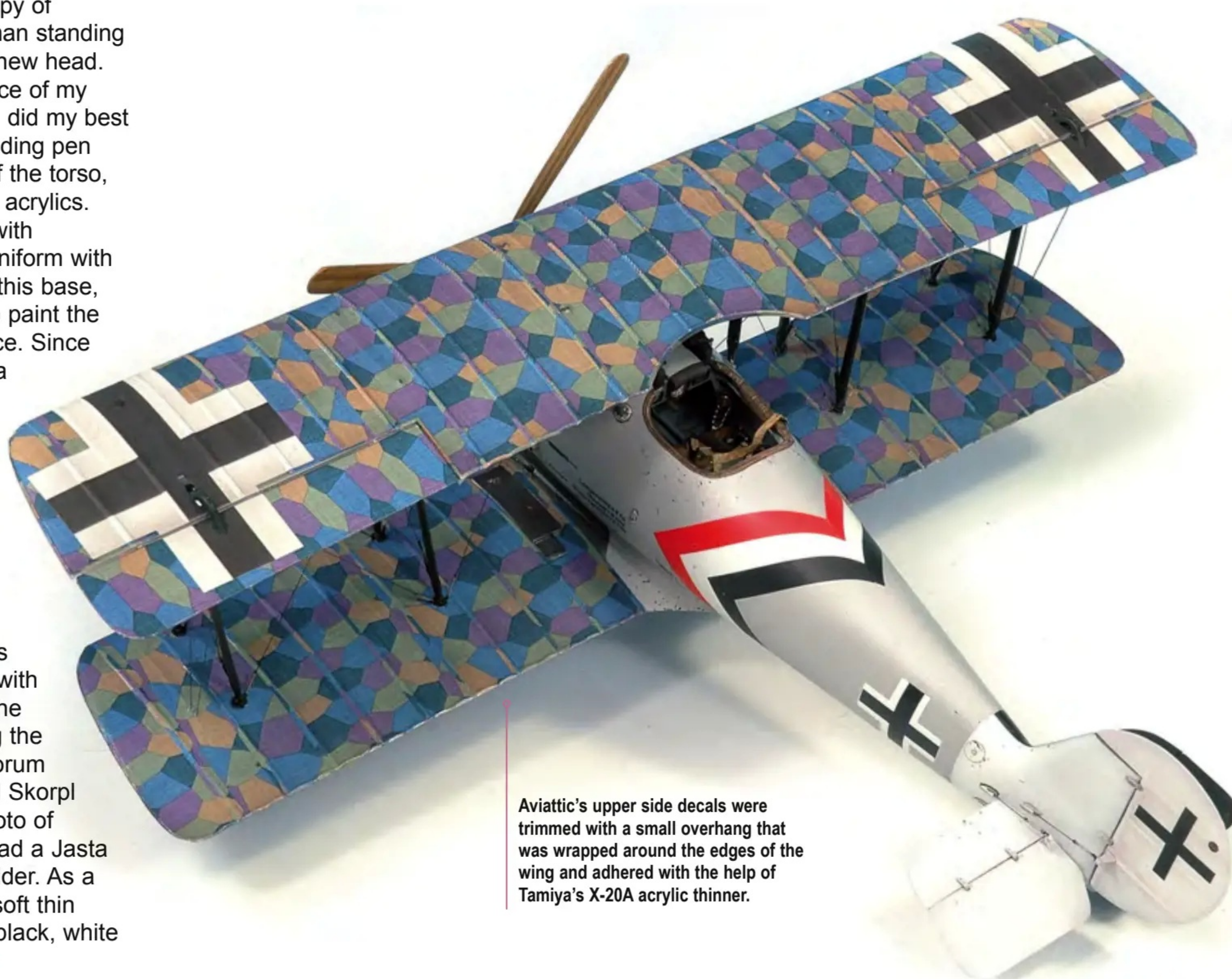
***"SINCE THE MODEL INCLUDED A RESIN FIGURE OF LTN PAUL BÄUMER, I DECIDED TO BUILD THE AIRCRAFT FLOWN BY HIM WHEN HE LED JASTA "BOELCKE" IN MAY 1918..."***

#### PAUL BÄUMER RESIN FIGURE

The figure included in the kit is a resin casting sculpted by Doug Craner. It is a copy of Aviatic's previous figure of a German standing pilot ATTRES 031 modified with a new head. Unfortunately the casting on the face of my example was slightly marred, and I did my best to clean it up. I used a Dispiee sanding pen to clean the seams from the rest of the torso, arms and legs and painted it using acrylics.

The figure was first airbrushed with Tamiya's flat black, and then the uniform with a mix of field grey and blue. Over this base, dilute Vallejo acrylics were used to paint the details including the hands and face. Since the goggles were nicely cast with a circular opening, I punched out two 2.0mm discs from a sheet of acetate and added them as lenses with a touch of Future acrylic to secure them in position.

The figure features Bäumer wearing a Pour-le-Merit medal, which he received well after he'd been injured in a crash which is thought to have happened with this aircraft. I nevertheless posed him with the model for some photos which he compliments well. After completing the model, a friend from the Internet forum [www.WWIaircraftmodels.com](http://www.WWIaircraftmodels.com) Bertl Skorpl shared with me an un-cropped photo of Bäumer's Pfalz D.VIII showing it had a Jasta leader streamer attached to its rudder. As a final touch, I painted up a strip of soft thin metal with the Imperial colours of black, white and red and wired it to the tail. ➤



Aviatic's upper side decals were trimmed with a small overhang that was wrapped around the edges of the wing and adhered with the help of Tamiya's X-20A acrylic thinner.



## ◀ CONCLUSION

The opportunity to build this kit was indeed a privilege. I was impressed with the packing of the parts, the detail, and quite dazzled at the overall effort Aviatic had delivered to produce a very unique subject. The fit of everything was extremely good, which speaks volumes for the engineering design, and production.

Although I studied the instruction guide fairly well, I still struggled to decide the build sequence. Test-fitting is emphasized throughout, and can't be over-stated. I also struggled with my limitations when dealing with 3D printed resin parts since I find them so brittle and susceptible to breakage. I spent a fair amount of time on my hands and knees with a low-angled torchlight hunting for the ones that launched from my not-so-trusty tweezers. The use of 2-part epoxy glue to strengthen the joints of struts and control surfaces will be a handy addition to my go-to adhesives even for injection moulded styrene models. Although the stuff is messy to work with, it was essential for this build. The model was a great test of the skills I've learned over my years of modelling. Although certainly not for beginners it stands as one of the best in its class. •

## MODELSPEC

Aviatic 1:32 scale Pfalz D.VIII Pour le Merit Collector's Edition. Kit No. ATTKIT012

### Accessories used:

- EZ Line Rigging Line Fine Charcoal
- Gaspach Models 1:48 Metal Turnbuckles Type C
- Gaspach Models 1:48 Resin Turnbuckles Type C

### Tools and Materials Used:

- Tamiya Extra Fine Cement
- Magic Sculpt Epoxy Putty
- Lepage Speed Set Epoxy adhesive
- Mercury Adhesives Super Glue Thin & Medium types
- Harder & Steenbeck Infinity CRplus Airbrush
- DSPIAE Sanding Pen ES-P
- Walter Products 3.5x - 90x Trinocular Stereo Microscope with a 144LED ring light WP-1AFZ-IFR07-5N
- 10mm Tamiya Masking Tape
- Fly fishing lure lead wire 0.02"
- Micro drill set
- Copper Wire 0.1mm
- EZ-Line fine rigging line

### Paints and Finishing Products Used:

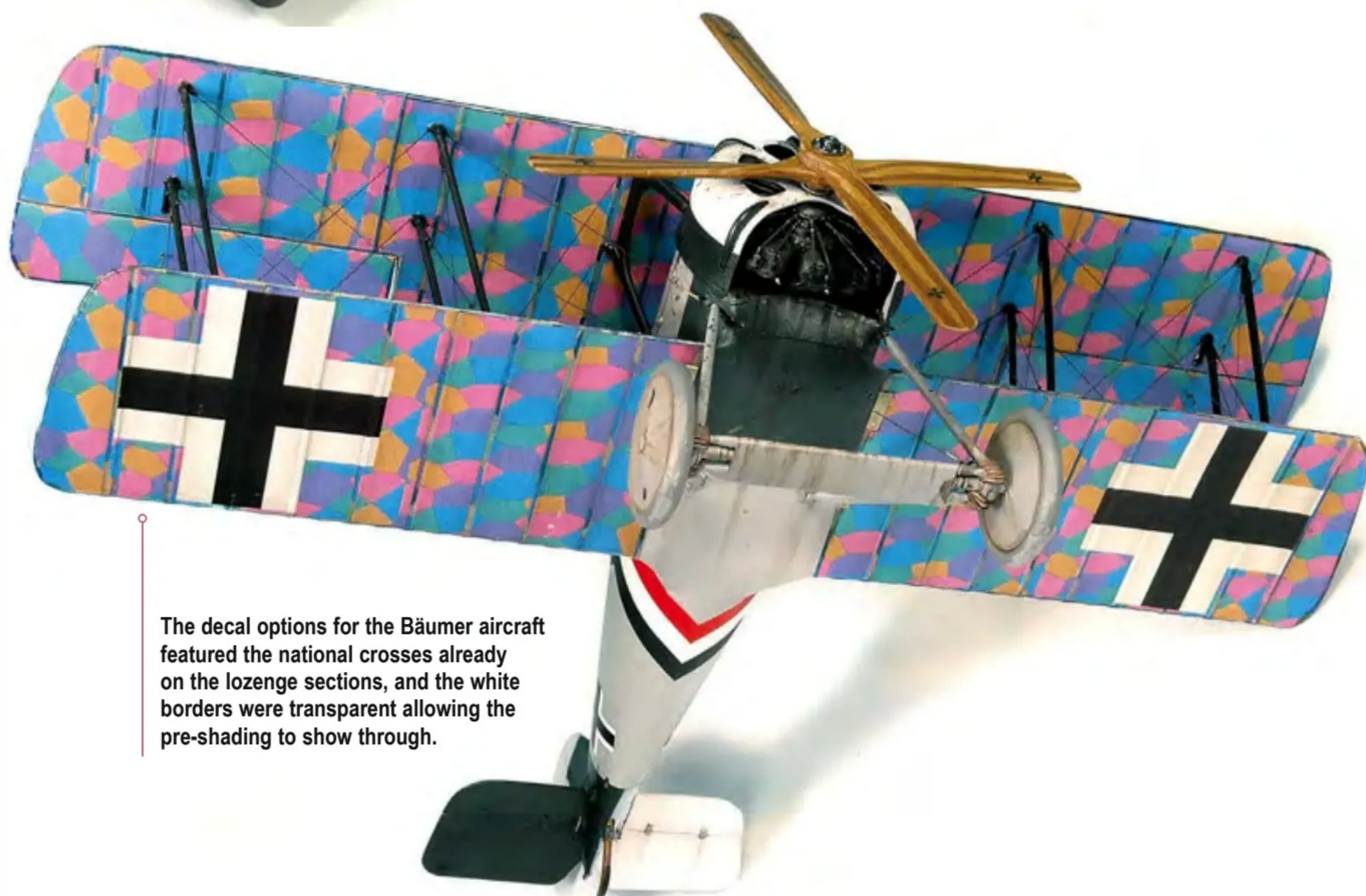
- Tamiya Acrylic paints & thinner as listed in the paint callouts.
- Winsor & Newton Oil Paint Series 1 554 Raw Umber, 744 Yellow Ochre, Ivory Black, 074 Burnt Sienna
- Vallejo Acrylic paints as listed in the paint callouts
- Alclad II lacquer paints as listed in paint callouts
- SC Johnson Pledge floor gloss (Future)
- Model Master enamel Chrome Silver
- Uschi metal polishing powder Steel Type 4009
- Lacquer thinner
- Mineral Spirit thinner
- Rembrandt Artists Chalk Pastels various colours.

### References:

- Jagdstaffel 2 "Boelcke" by Greg VanWyngarden, Osprey Aviation Elite Units number 26
- Pfalz Scout Aces of World War One by Greg VanWyngarden, Osprey Aircraft of the Aces number 71



To help the decals conform to the pronounced detail, the film was punctured with a sharp blade, and a slight amount of X-20A applied before gentle pressure was applied.



The decal options for the Bäumer aircraft featured the national crosses already on the lozenge sections, and the white borders were transparent allowing the pre-shading to show through.



Two different wheel options were offered, these ones being a slightly flattened type to show proper "sit" on the ground. The wheels were weathered with oil paints and given a light brush with earth coloured pastel chalk dust.





Each of the turnbuckles had the middle painted in a brass acrylic.



By allowing all of the turnbuckles to swivel on the copper loops, they were in alignment with the rigging when pulled taught and secured with cyano glue.



The frame lines of the rudder were masked after it was painted white, and then a subtle over spray of X-19 Smoke added.

Two tail skids are supplied for the model, one for "in flight" and the other for "landed" with the appropriate angle as an option.



A last minute addition was the Jasta leader streamer to the rudder after a fellow modeller pointed it out on an "uncropped" photo of Bäumer's Pfalz D.VIII.









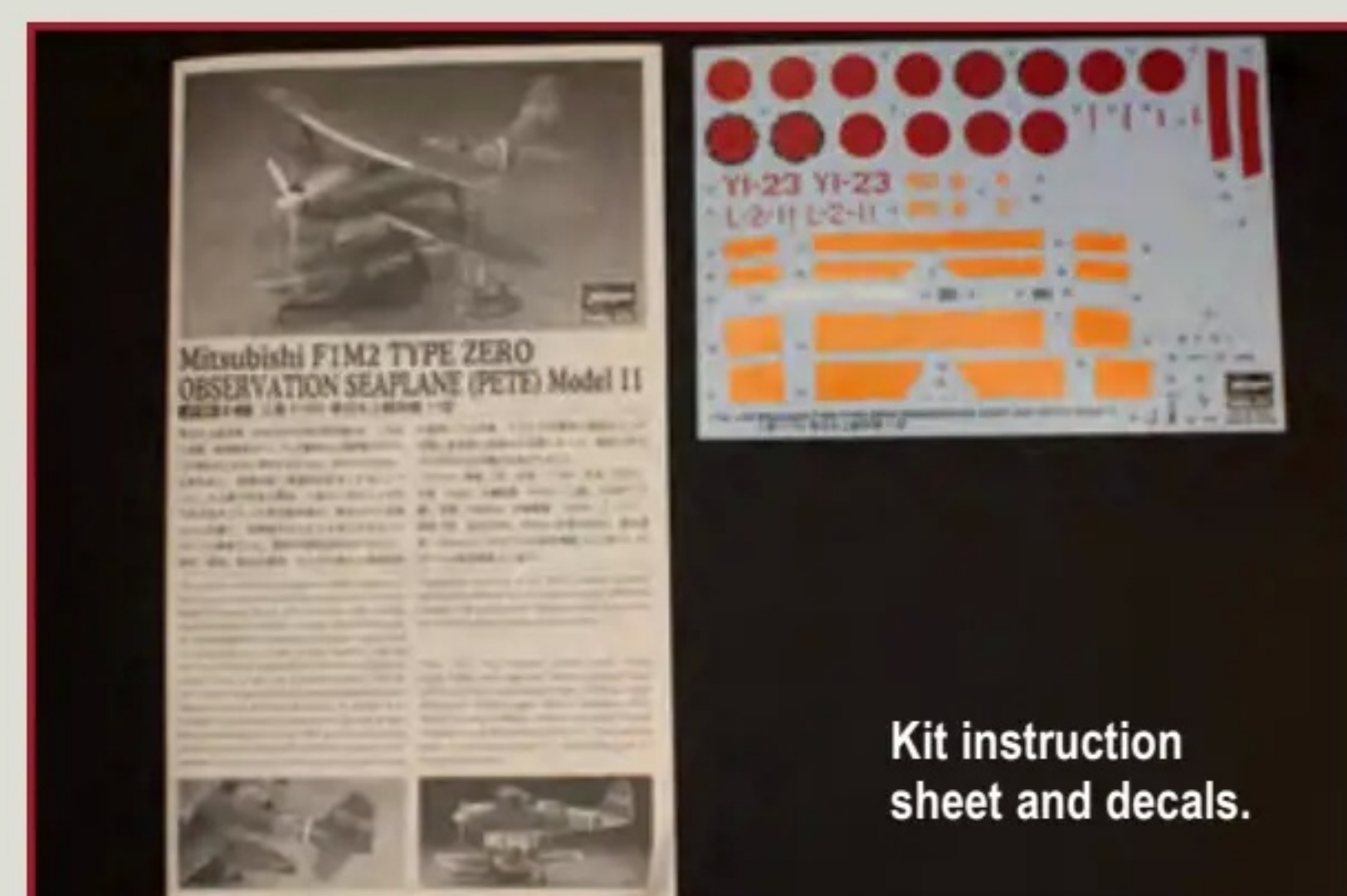
# READY FOR LAUNCH

**Brian Tomasin** delivers a stunning display using Hasegawa's Pete floatplane and a rapid prototyped I.J.N. catapult in 1:48 scale.





Kit, photo etch rigging, canopy mask, after-market resin 7.7 machine gun and engine kit



Kit instruction sheet and decals.



Reference photo of Pete ready for launch

**T**he Type Zero Observation Seaplane, Pete, the F1M2 built by Mitsubishi, was the Imperial Japanese Navy's reconnaissance and light bomber. Its primary mission was spotting for battleship gunfire and was used to perform many additional roles in the I.J.N. Pete was stationed aboard battleships and cruisers equipped with large deck catapults and onboarding equipment consisting of cranes and trolleys. It was designed to be the highest accomplishment for a sea going biplane.

Its aerodynamics were refined to the pinnacle of biplane maturity, with dihedral elliptical wings and large aspect ratio, minimal struts and tension lines and above all, a sophisticated

aerodynamic line from float to fuselage. This aircraft was Mitsubishi's last biplane. Its versatility allowed it to perform reconnaissance, sea patrol, convoy escort and light bomber duties with a modest bomb load. Approximately 1,000 Pete seaplanes were manufactured until the end of production in 1944.

### PETE IN 1:48 SCALE

Hasegawa's F1M2 in 1:48 scale is a highly detailed small model and a good challenge with super detailing, painting, and especially weathering. This is a 2009 kit from Hasegawa.

My intent is to display Pete at home on its catapult launching cradle as it would have appeared on an I.J.N. Battleship. I was able to

locate a rapid prototyped I.J.N. catapult in 1:48 scale and plan to use this ensemble to create a stunning display. I want to emphasize the finish and weathering techniques to portray the brutal elements the aircraft operated in.

### IN THE BOX

The kit is a high-volume state of the art injection moulded kit. The box art is beautifully illustrated along with completed model photos. There are 13 sprues, including open and closed canopy parts and an impressive instruction sheet. A beaching dolly is included.

Marking and painting section includes illustrations for 3 different aircraft operating from 1942 to 1945.



Deck catapult, turntable, cradle and trolley rapid prototyped parts modelled with great detail.



## CONSTRUCTION

The kit's assembly and fit are high quality straight from the box. The Hasegawa rigging I added does elevate this model into an expert model maker skill level. In general, a thorough study of the instructions is required at the start of the project. Adding the model catapult to the presentation does add more difficulty. I will detail assembly of the plane, catapult and cradle assembly in this article.

## COCKPIT

The cockpit out of the box has excellent detail in itself, but I want to add more detail, I used the Hasegawa interior set #QG-32 photoetch pieces for all its dashboards and gun sights. Use of these photoetch parts requires master modeller skills as plastic parts are replaced with photoetch pieces. The process of painting the stainless-steel parts, applying kit decals, folding pieces to final shape and placement requires

patience. STEP 1 inset of kit instructions shows clearly which plastic parts are replaced and placement of the decals. Study these instructions. The main dashboard, part L10 does have its support frame used, so it required removal of the frame and glueing it to the replacement photo etch piece MA-9. As is the case with Japanese fighter aircraft, getting a good look at the cockpit is limited in 1:48 scale.

One valuable note Donald W. Thorpe makes in his book is the difference of interior colour used on Japanese Navy aircraft versus the Army. The Navy (JNAF) used light grey green (N7) or dark grey green (N2) as standard colouration for cockpit and crew compartments. With my model, I used Tamiya XF-71 Cockpit Green with black pre-shading. This allows interior structures to be highlighted and creates a lot of depth.

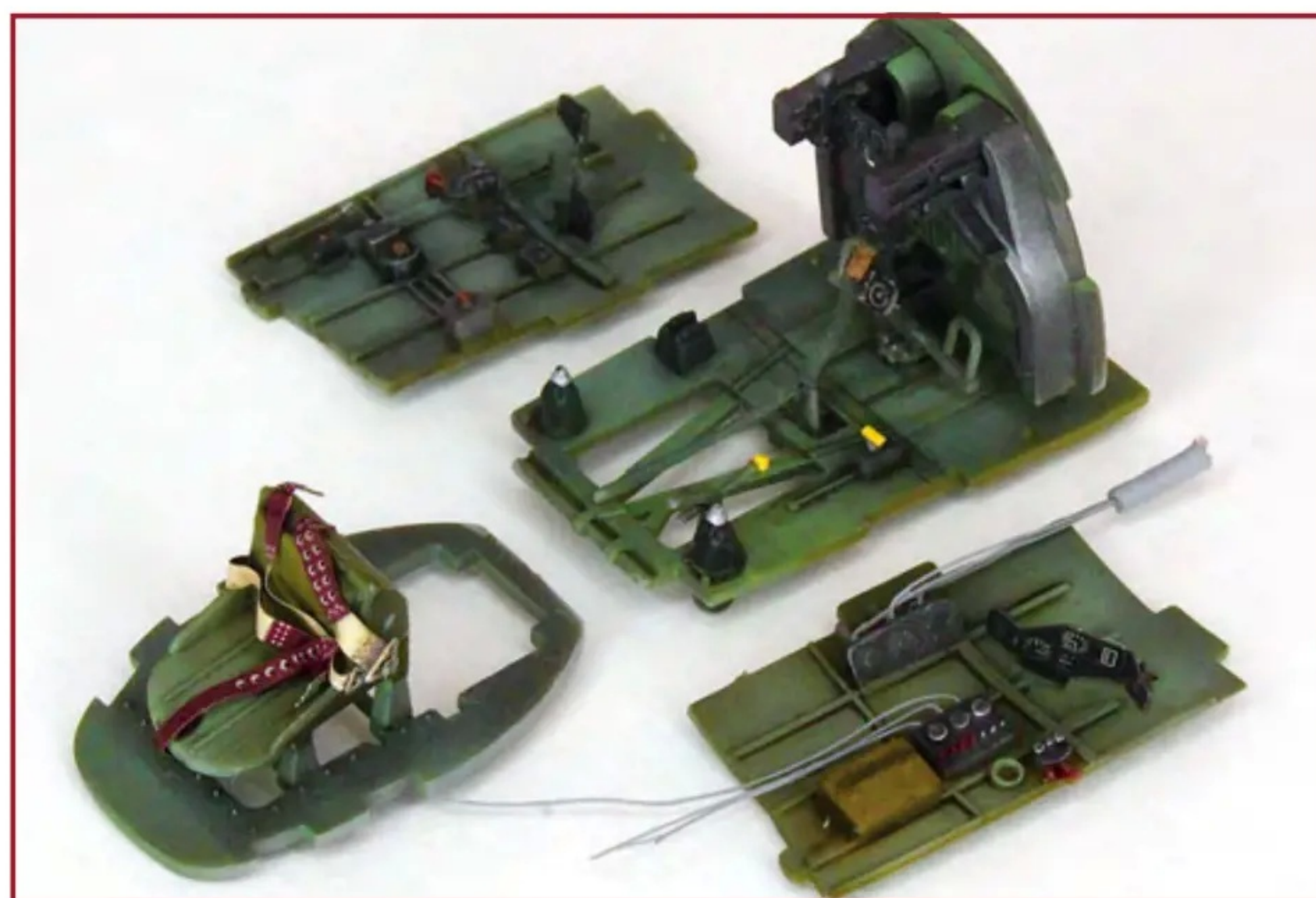
The cockpit is comprised of a major floorboard/bulkhead piece with lever details,

dashboard and other control features as separate pieces. The instructions on the cockpit are clear and concise and illustrates assembly of 2-3 pieces at a time, very manageable. The pilot's cockpit and the radioman's compartment are well appointed with moulded details. I enjoyed the process of highlighting with dry-brushing and use of panel wash to accentuate the crisp details. The finished cockpit assembly fits into the fuselage halves perfectly, nice engineering.

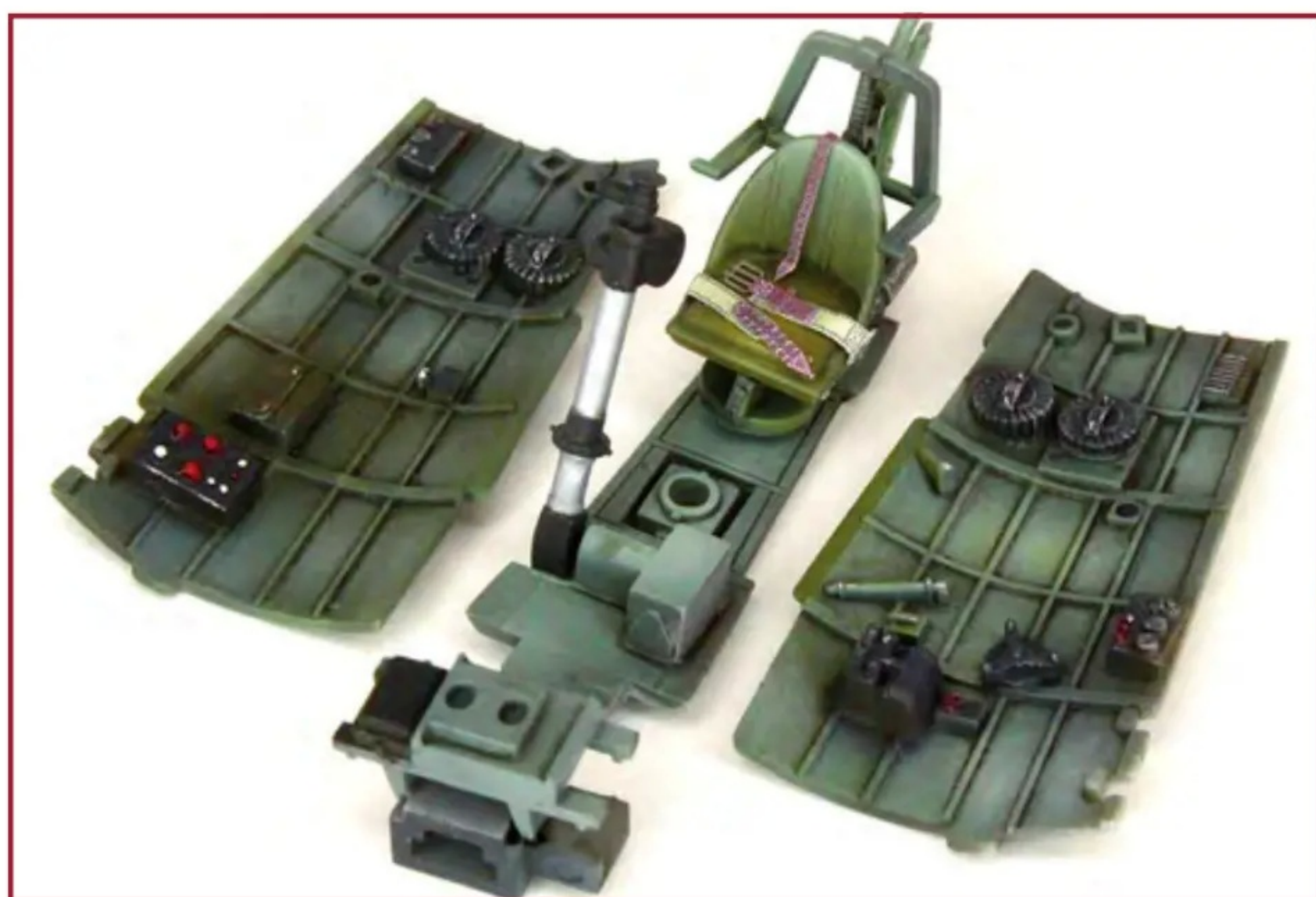
Also added were wiring harnesses to the control panels on the cockpit sides. Wiring is individual strands of 26 gage electrical wire.

## PONTOONS

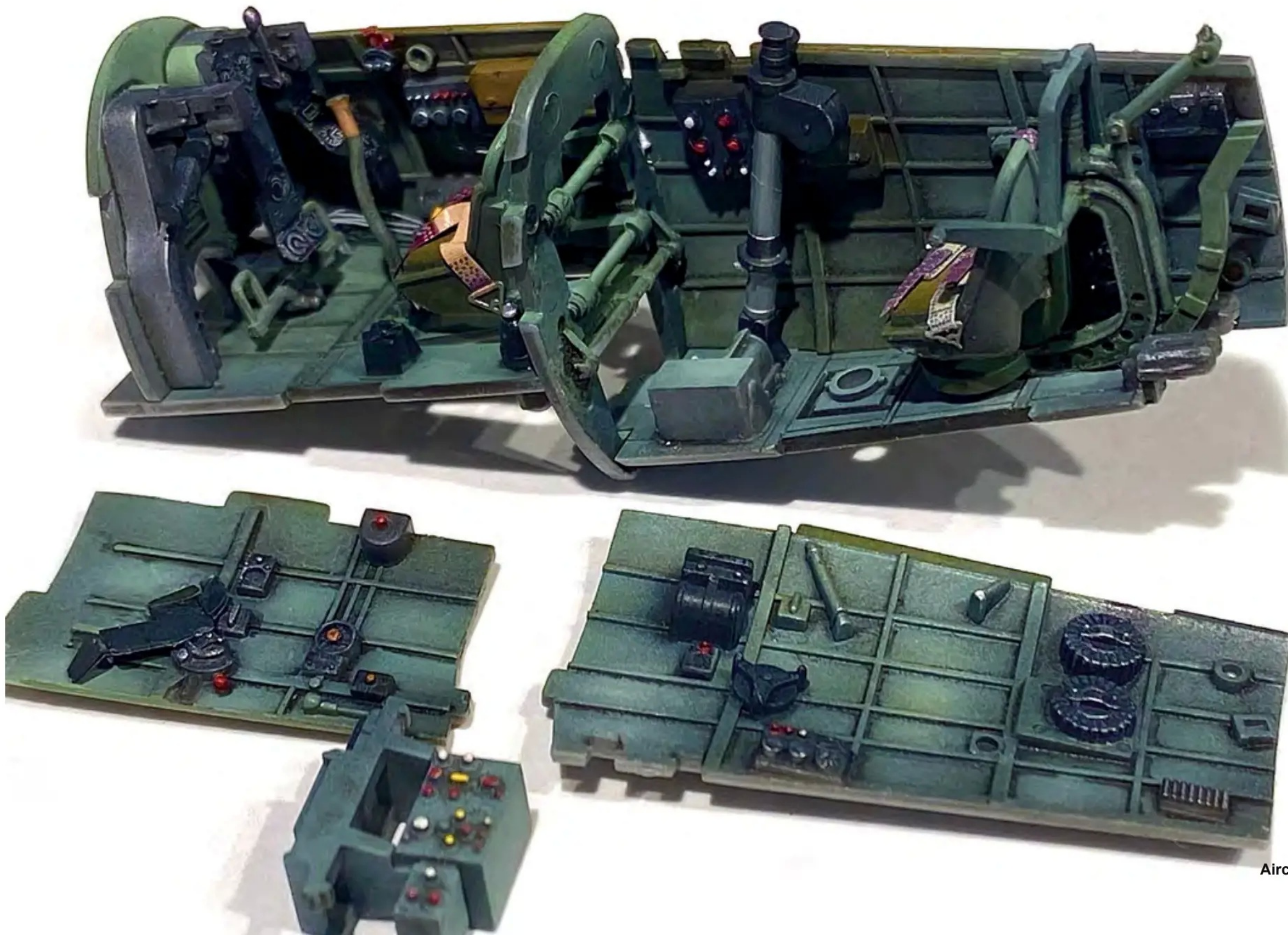
As instructions note in step 8, I added additional 20 grams weight to the front of the main pontoon before closing the parts. The lead weight was secured into place with medium thickness CA glue and a plastic rib added. ➤



Pilot's compartment with added wiring harnesses.



Radioman's compartment.







## ◀ WING ASSEMBLY

Assembly of all the wing components and struts with after-market rigging is a slow, delicate dance to completion. Assembly of lower wing at STEP 3, parts B1, B6 and B7 to each other and to fuselage is straight forward. Same goes for upper wing parts C1 and C2. After completion of STEP 4, construction slowed down and jumped to STEP 6, 7 and 8. Painting, decaling and weathering all occurred prior to assembly of photo etch rigging, struts and upper wing.

## WING RIGGING

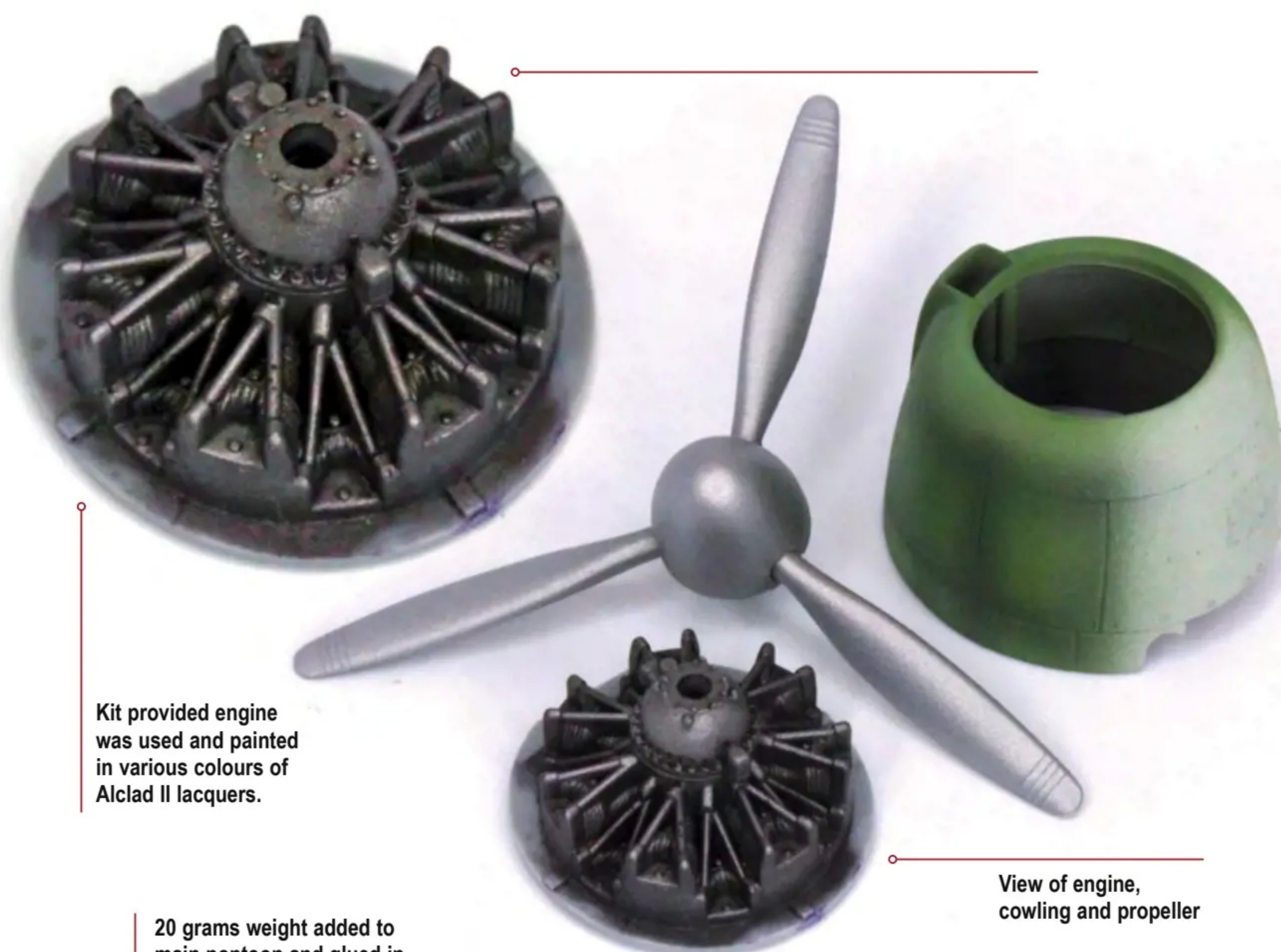
Three words, study the instructions! The aftermarket rigging parts elevate this model build into an expert skill level. Patience, a delicate touch and precision placement are required to make these details look good. The rigging for the wings literally comes in one large stainless-steel photo-etch fret. I have to state that understanding the instructions was a must before starting wing assembly. Attachment of the delicate rigging happened following STEP 8, painting, decaling and weathering with only the gunner's clear canopy assembled following the inter-wing rigging.

Cowling rigging photo-etch parts were installed after weathering but before top wing was attached. 0.020 holes were drilled in the cowling for placement of these rigging parts. Tops were attached to the cowling wing struts.

I drilled placement holes for the ends of all rigging before model was assembled and primed. The placement of the photo etch rigging parts is time consuming, but good news is, placement of turnbuckles ( parts MA27 – MA34) were marked with pilot holes moulded on wings and fuselage. I chose to drill a 0.020 diameter hole at each of these locations to provide precise placement.

According to instructions, rigging starts at STEP 5, but I chose later, after STEP 8. Rigging is delicate. The rigging process started at the fuselage and worked outward. Study these illustrations for how and where to install parts MA9 thru MA12 in front of cockpit. To note again, the rigging parts MA9, MA10, MA11 and MA12 occurred after struts and wings were painted and decaled.

The X wing rigging parts (MA13 and MA15) were formed and turnbuckle parts (MA27-MA34) attached with CA thin glue. Turnbuckles only were painted the fuselage colour prior to



Kit provided engine was used and painted in various colours of Alclad II lacquers.

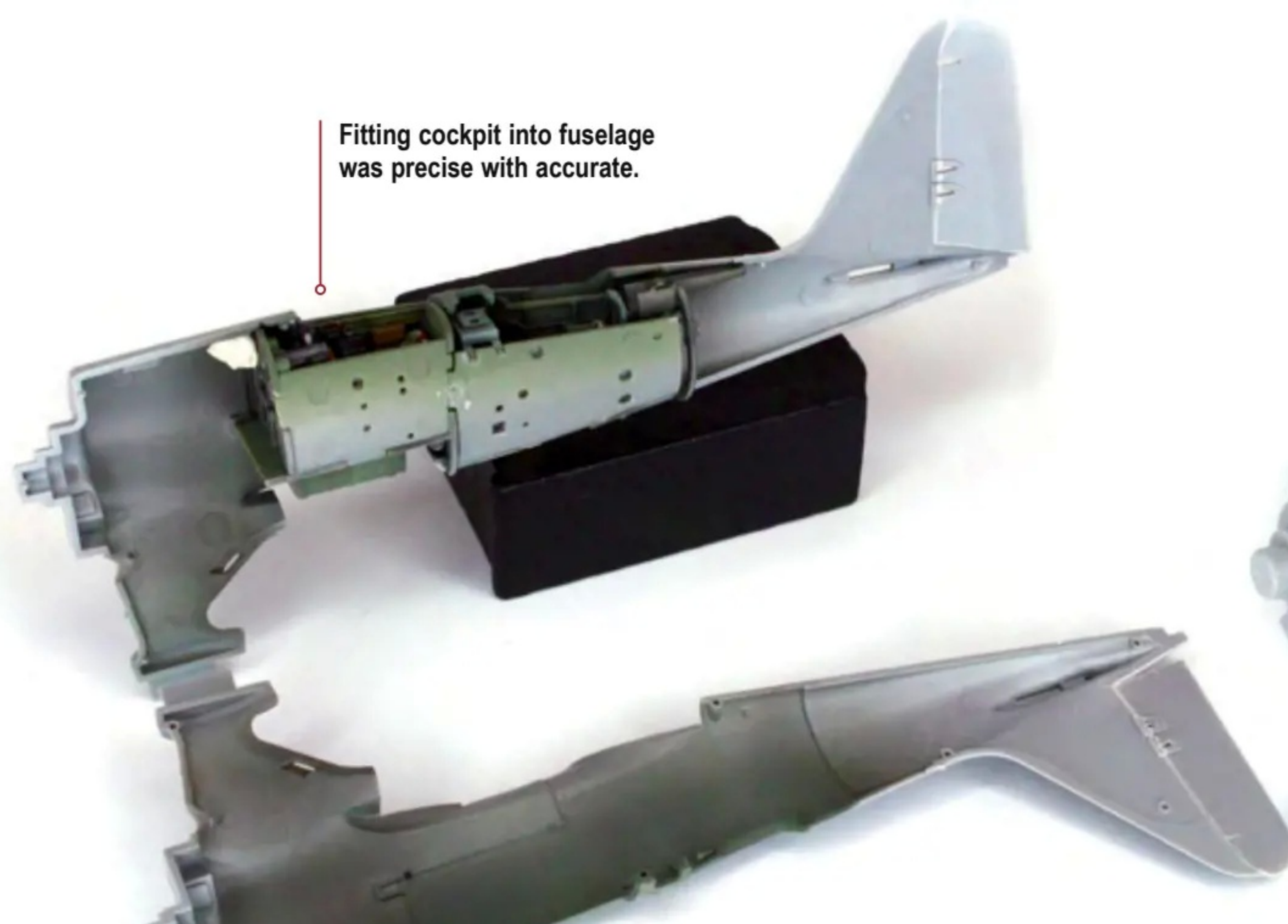
View of engine, cowling and propeller

20 grams weight added to main pontoon and glued in place with a small styrene rib.



Lower wing assembled with in upper wing still on sprue.





Fitting cockpit into fuselage was precise with accurate.



The fit along the perimeter fuselage seam was perfect without any voids.

assembly to the wings and fuselage.

Rigging parts MA25 and MA26 were literally the last parts attached to this model.

## CATAPULT AND TROLLEY ASSEMBLY

The aftermarket catapult, turntable, cradle and trolley are beautifully modelled. The catapult and turntable appear to be the SLS (Selective Laser Sintering) process for rapid prototyping. They are fabricated from a styrene polymer powder. The cradle and trolley appear to be modelled in the SLA (Stereolithography) process out in a urethane resin. The fidelity of these parts is exceptional.

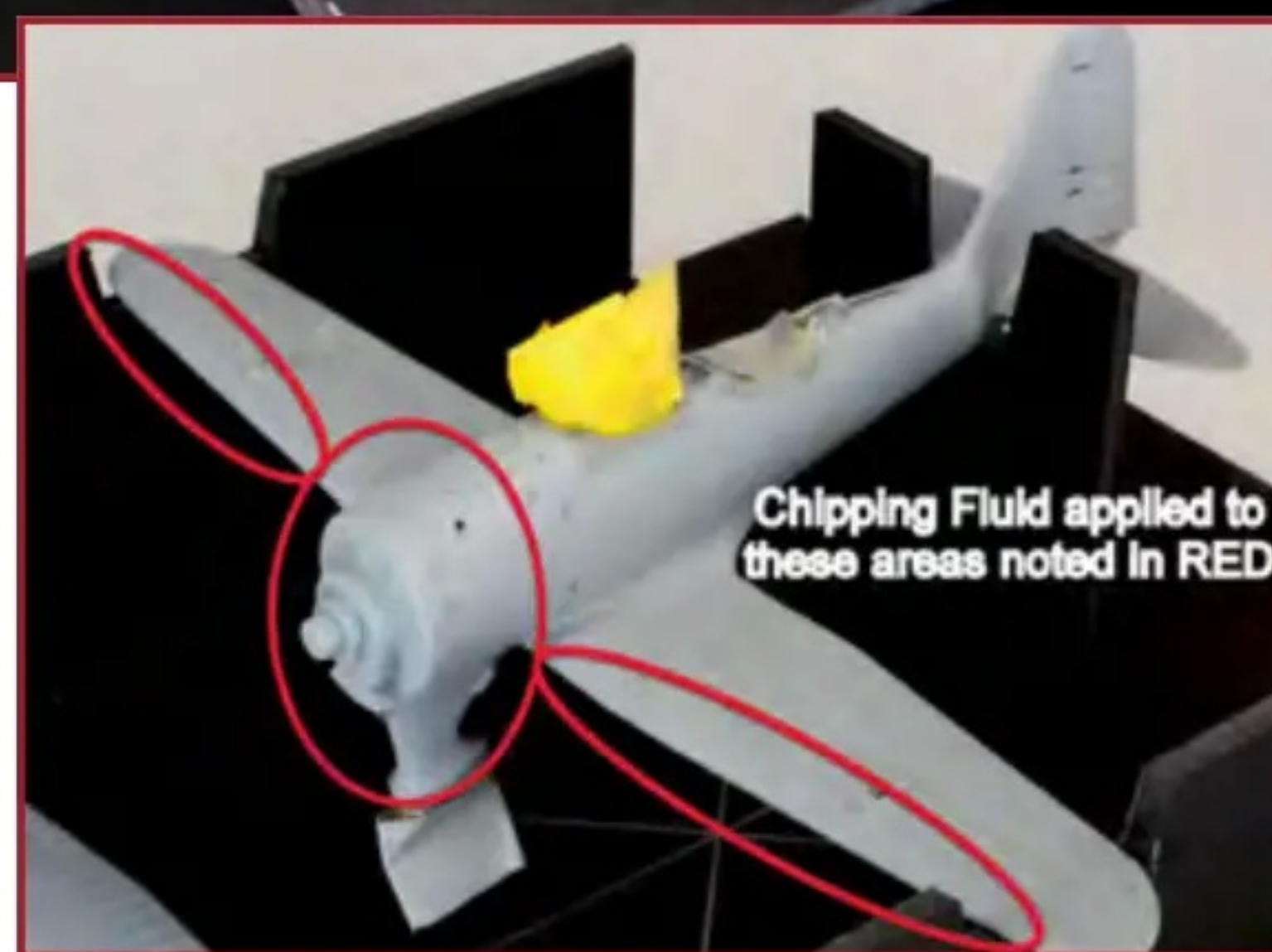
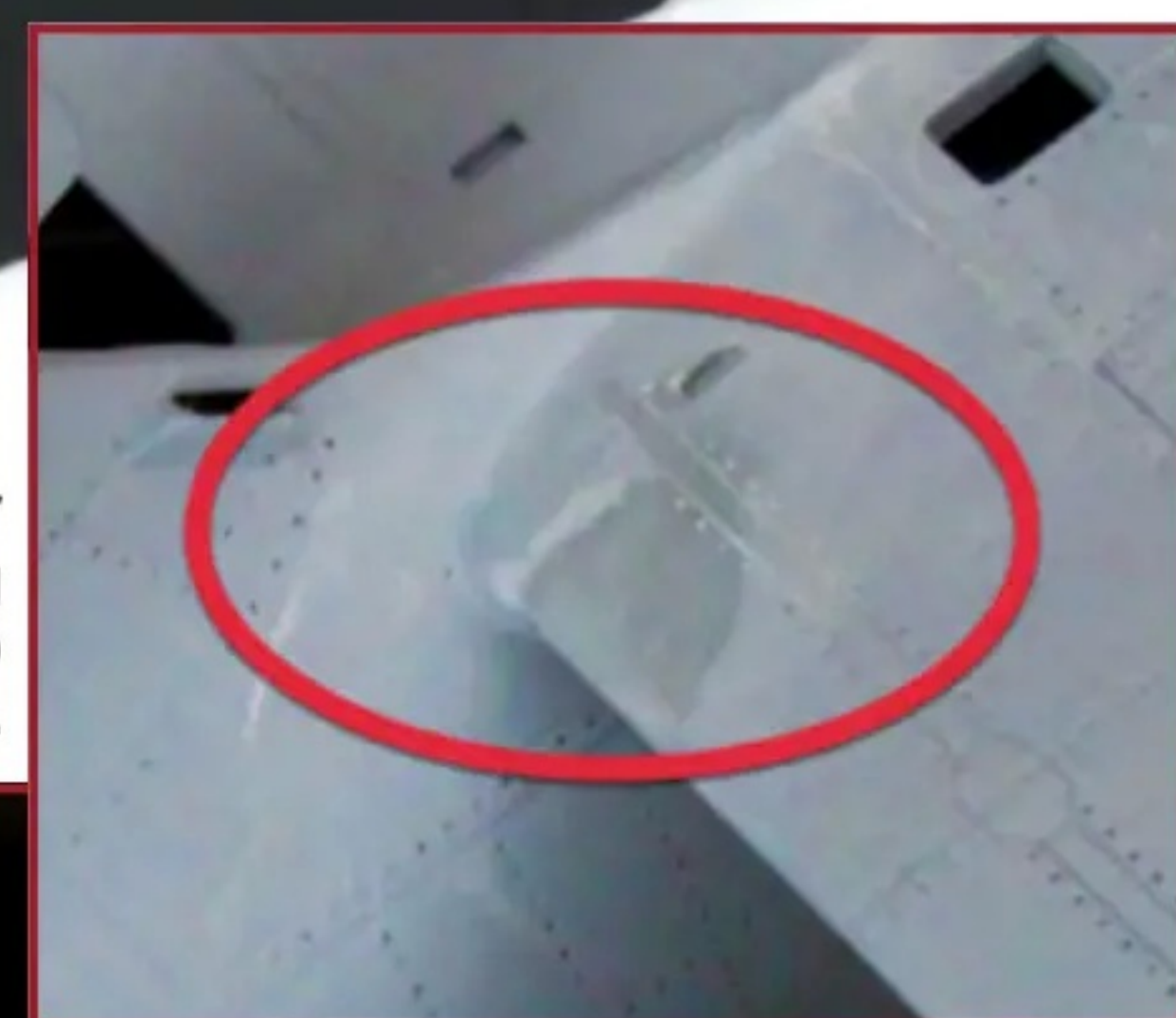
The catapult, turntable, cradle and trolley all fit together nicely in terms of scale dimensions. I did want to improve the assemblies and make their attachment to each other more robust. For the catapult and turntable, I added machined PVC parts that improve attachment to the pedestal and between the rapid prototyped parts themselves. This, so I can assemble and disassemble the whole display without fear of damage as needed for storage. A displayed seaplane attached to its shipboard catapult is an unwieldy assembly at best.

With the cradle, I added plastic ribs so there is a more secure fit to the catapult track and trolley. The cradle will be mounted to the bottom of the central pontoon and slide nicely onto the catapult track below. The plastic ribs added, secure placement on both catapult and trolley. The cradle will then be attached to the plane. This also gives me some display options where the cradle/plane assembly can be displayed on the larger catapult or the smaller deck trolley. This entailed fabricating a 0.06 thick key and attaching it to the cradle in an inconspicuous way and detailing it just enough to look like a natural part of the assembly. The key, 0.06 styrene, was mounted to a bulkhead on the cradle with CA glue.

The receiving slot for this key is on the underside of the central pontoon. This was a rather nerve-racking process of cutting holes and slots on the finished central pontoon, but I think I found a good solution to make the cradle/plane connection strong and robust and provide display options. Improving the robustness of the total display will protect the model during storage, transport and presentations.

Catapult, cradle and turntable were painted Tamiya XF-87 IJN Grey (Maizuru Arsenal). MIG Ammo Dark Wash was used extensively on the catapult with rust and dirt affects added by sponge painting. ➔

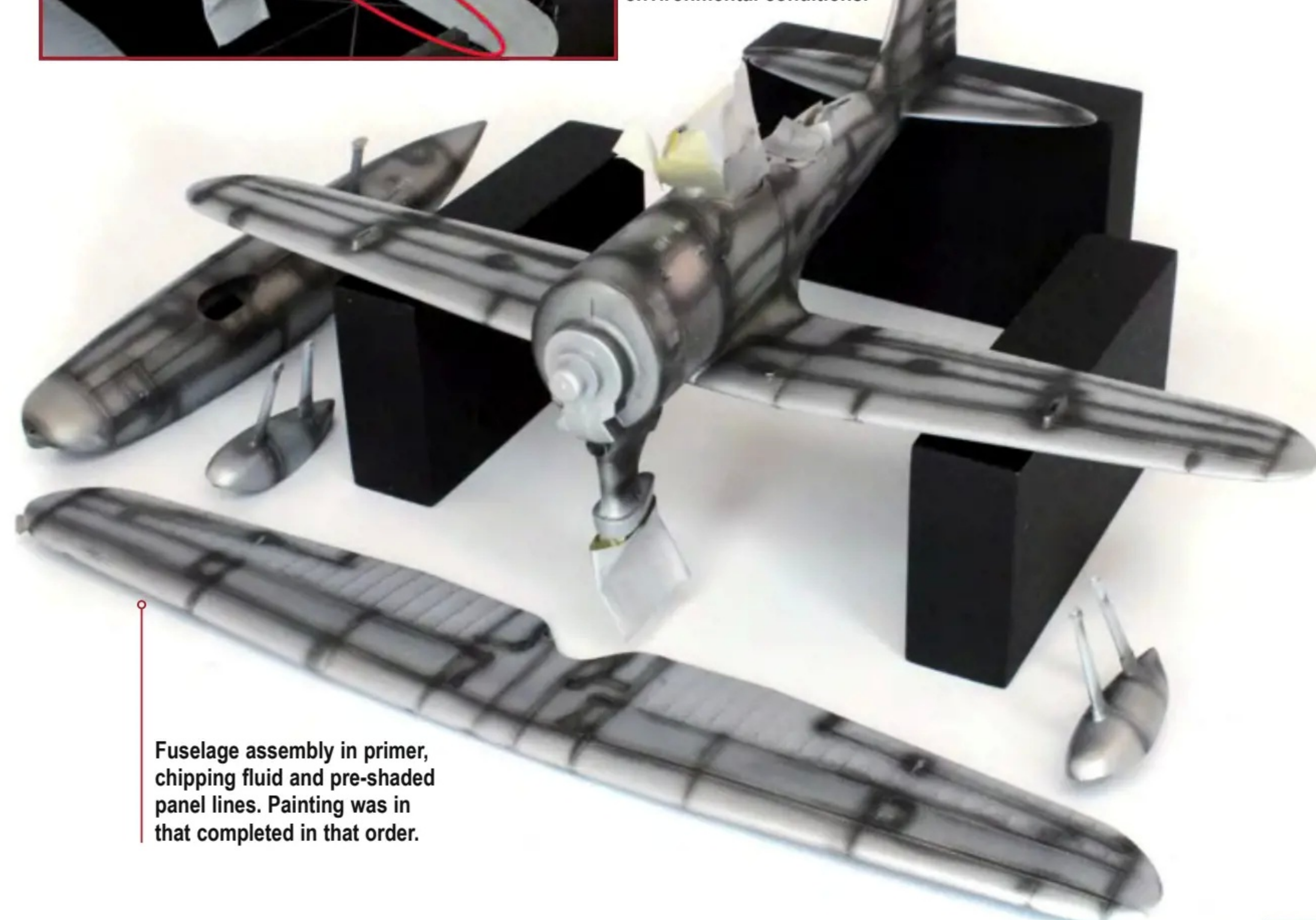
The only spot needing Mr. Surfacer filler was the intersection of Wing Assembly to Fuselage, a tribute to Hasegawa engineering.



Chipping Fluid applied to these areas noted in RED

View of fuselage, wing and pontoons painted in primer and Alclad Dark Aluminium. Then, only selected areas on were sprayed with Mig Ammo Heavy Chipping Fluid prior to pre-shading of panel lines. Pete's surfaces were combination of aluminium and fabric covered, so only the aluminium covered surfaces will get chipping affects.

Areas with chipping fluid applied were leading edges, top of wings and sides of front fuselage. These were exposed to extreme environmental conditions.

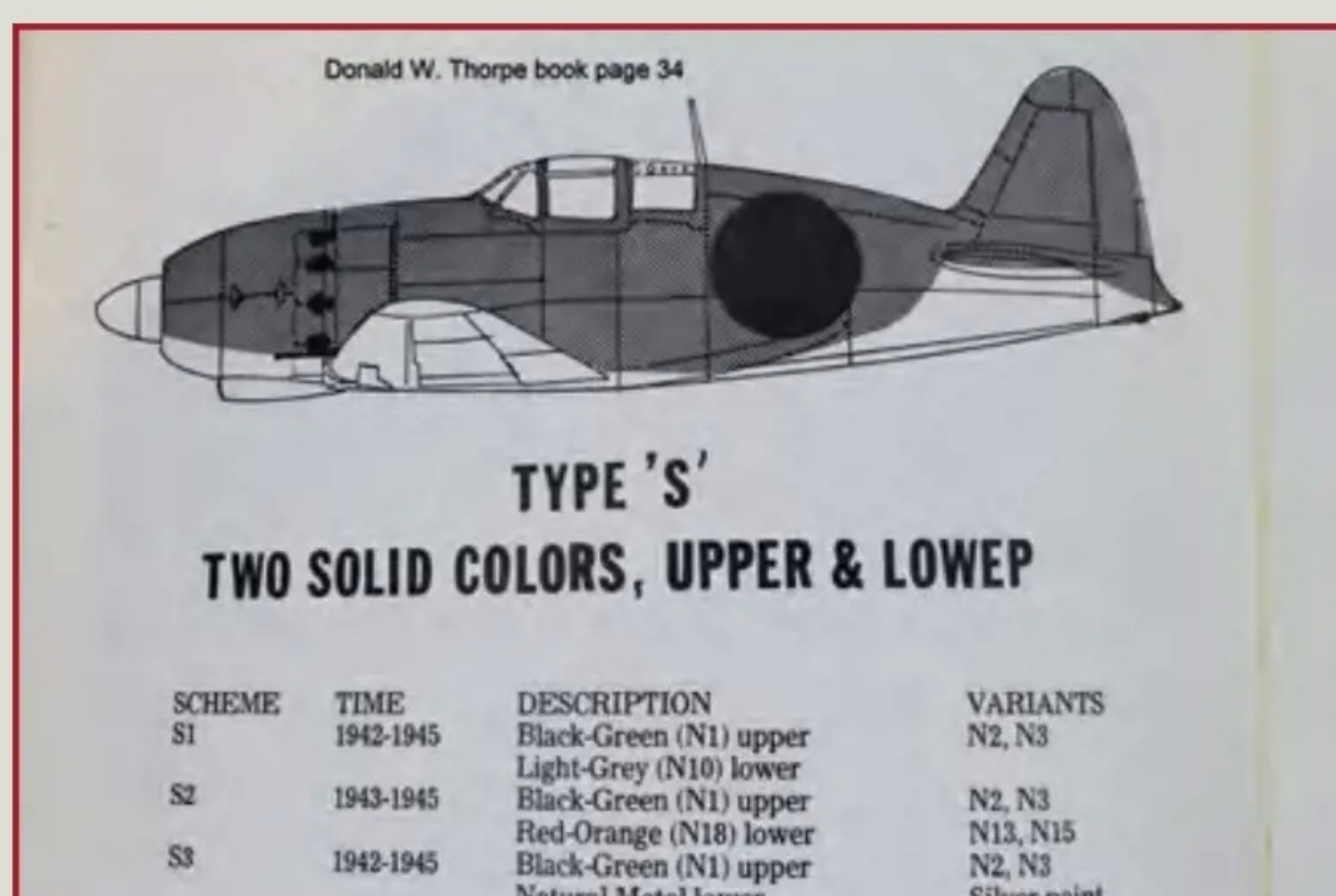


Fuselage assembly in primer, chipping fluid and pre-shaded panel lines. Painting was in that completed in that order.

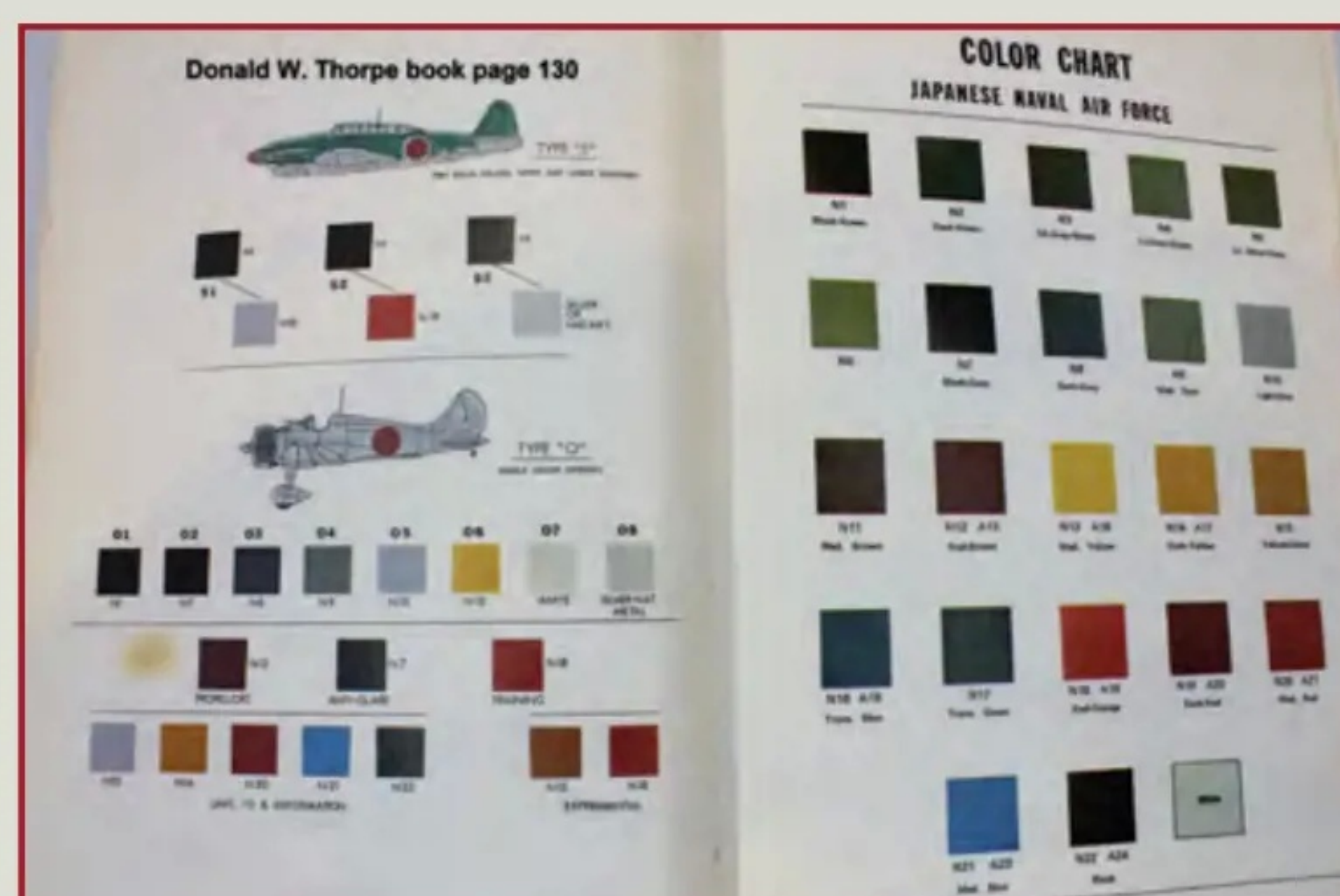




Donald W. Thorpe book used as master reference



Type 'S' Paint scheme- Reference from Thorpe book page 34



Reference from Thorpe book- page 130 regarding exterior colours of I.J.N. aircraft.

## PRIMING AND PREPARATION FOR CHIPPING EFFECTS

After model was primed, the entire model was polished with a 12000 grit polishing cloth. This to smooth the surfaces prior to application of the chipping fluid and the black pre-shading colour.

Only certain portions of top surfaces were covered with a light coat of MIG Ammo Heavy chipping fluid. This fluid is very similar to hair spray. This was sprayed from my airbrush out of the bottle and not reduced with any thinner. Remember, this is a water soluble clear coat that can be washed away and will eventually be sealed with a lacquer clear coat prior to decal application.

## PAINT CHIPPING AND WEATHERING

Japanese aircraft were subjected to harsh environmental and operational conditions. Their exterior paint showed every sign of these conditions and severe weathering is a feature when modelling an I.J.N. aircraft. Chipping the green paint is done after all painting is completed and prior to decaling. The chipping fluid applied to the selected areas on the model is a water soluble based clear coat. I allowed the fluid to dry completely before applying the camouflage green paint. When the green camouflage colour is painted over the dried chipping fluid, those areas are delicate to the touch. Meaning, any moisture on your fingers or masking tape applied to the area will pull off the green paint and expose the aluminium colour. You can see this on one photo. We are not ready to chip the green paint just yet, but if this does happen, you can paint over these areas again at this time to cover the aluminium colour. I did have to touch up several areas.

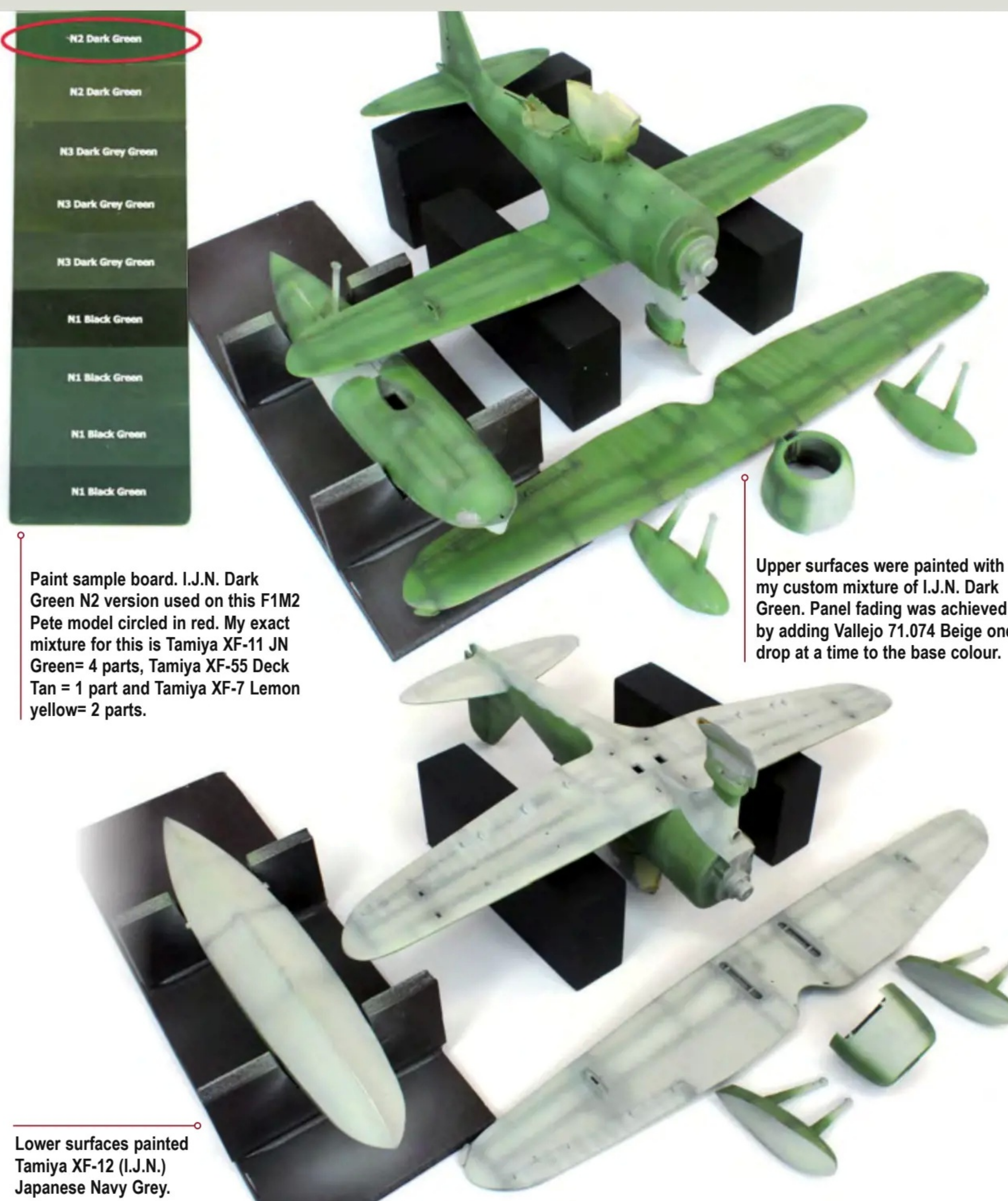
The green upper surfaces of pontoons were also coated with chipping fluid and weathered in the same way as upper fuselage.

Leading edges, wing walk ways, and engine access panel areas are obvious areas of wear and tear. Remember, when chipping the paint, use small amounts of water on the tip of a paint brush to soften the green paint. Work small areas, approximately 1 x 1, one at a time. This is an exercise in restraint. It is very easy to overdo this effect visually and make an absolute mess.

After completing the chipping of the green paint and the yellow wing identification stripes, you must seal the whole model with a lacquer based clear gloss coat. I used Testors clear Glosscote Top Coat. This will encase the



Paint sample board. I.J.N. Dark Green N2 version used on this F1M2 Pete model circled in red. My exact mixture for this is Tamiya XF-11 JN Green= 4 parts, Tamiya XF-55 Deck Tan = 1 part and Tamiya XF-7 Lemon yellow= 2 parts.



Upper surfaces were painted with my custom mixture of I.J.N. Dark Green. Panel fading was achieved by adding Vallejo 71.074 Beige one drop at a time to the base colour.

Lower surfaces painted Tamiya XF-12 (I.J.N.) Japanese Navy Grey.

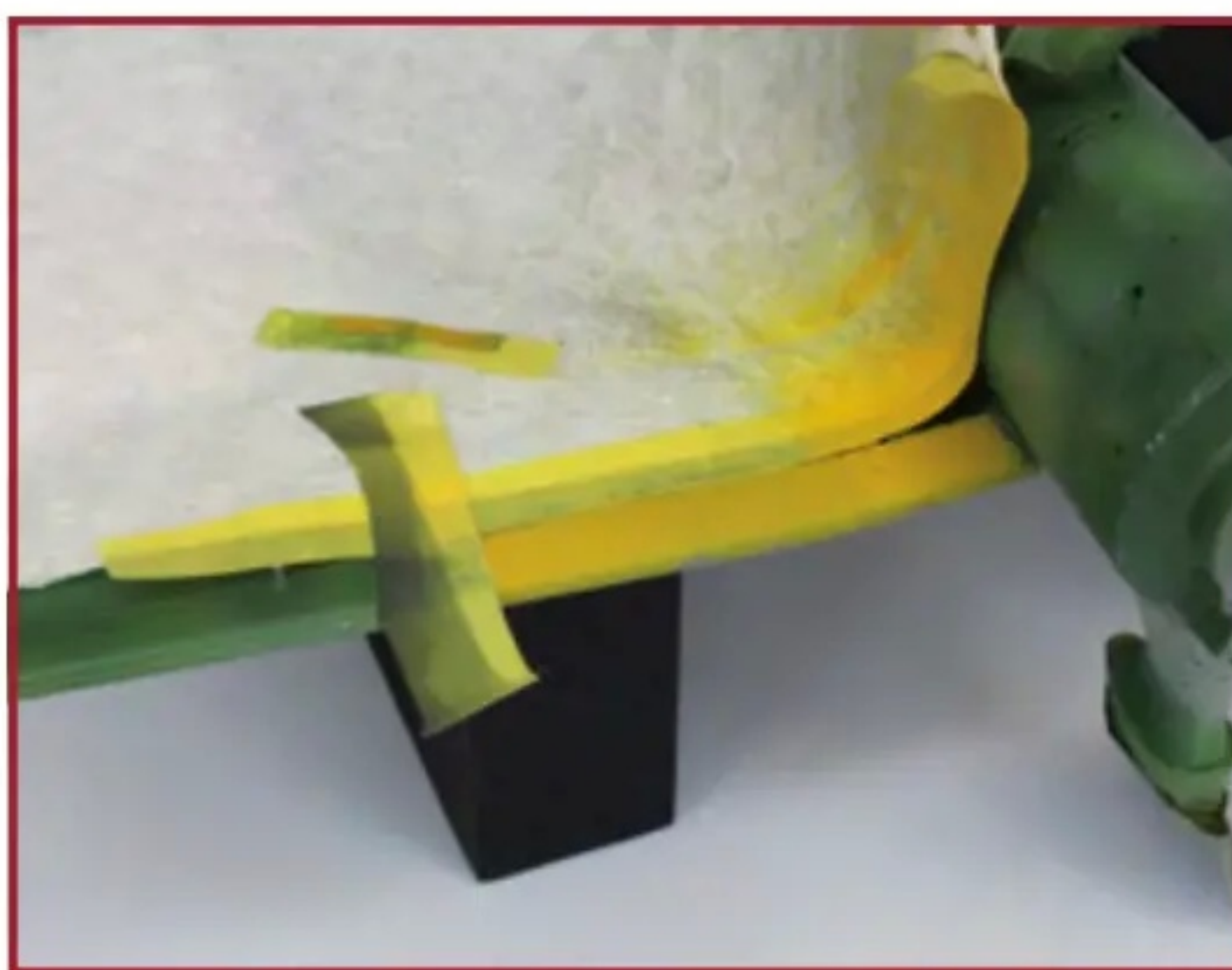


Chipping green paint was completed to areas exposed to severe wear and tear of these aircraft in the Pacific Theatre. I applied water with a small brush, waited about a minute for the green paint to soften, then used a sculpting tool and a very delicate touch to chip the green paint. Remember when the chipping process is completed, the model must be sealed with a lacquer based clear gloss coat.

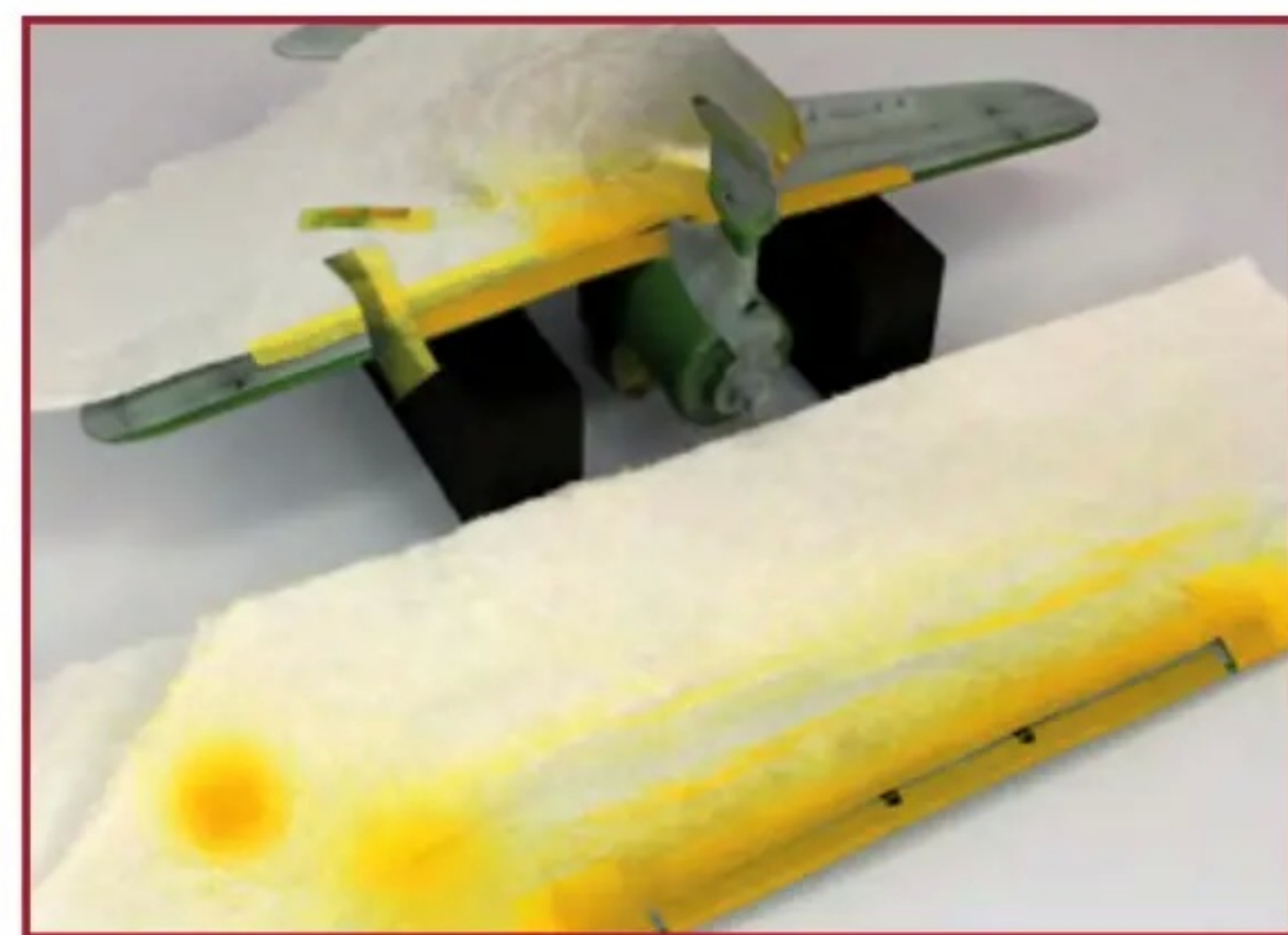




Canopy frame masked and painted interior cockpit colour first, then the exterior green.



I.J.N. yellow identification stripes masked and painted using Tamiya flat yellow XF-8 (10 parts) and Vallejo Light Red 71.086 (1 part).



water-soluble chipping fluid and green paint with a protective layer and allow you to apply decals in normal fashion. If you do not, the green paint will wipe away with water like dust on a dirty countertop!

Also, after this model is sealed with the lacquer clear coat. Aqueous and lacquer paints and washes can be used in a normal manner. The painted surfaces regain their durability to touch and to masking tape.

### PRE-SHADING

The model's panel lines were pre-shaded, top and bottom. Pre-shading on upper surfaces was painted on top of the chipping fluid, Alclad II Dark Aluminium ALC-103 colour and Tamiya primer. The lower surfaces were pre-shaded over just the Tamiya primer.

### PAINTING AND MARKINGS

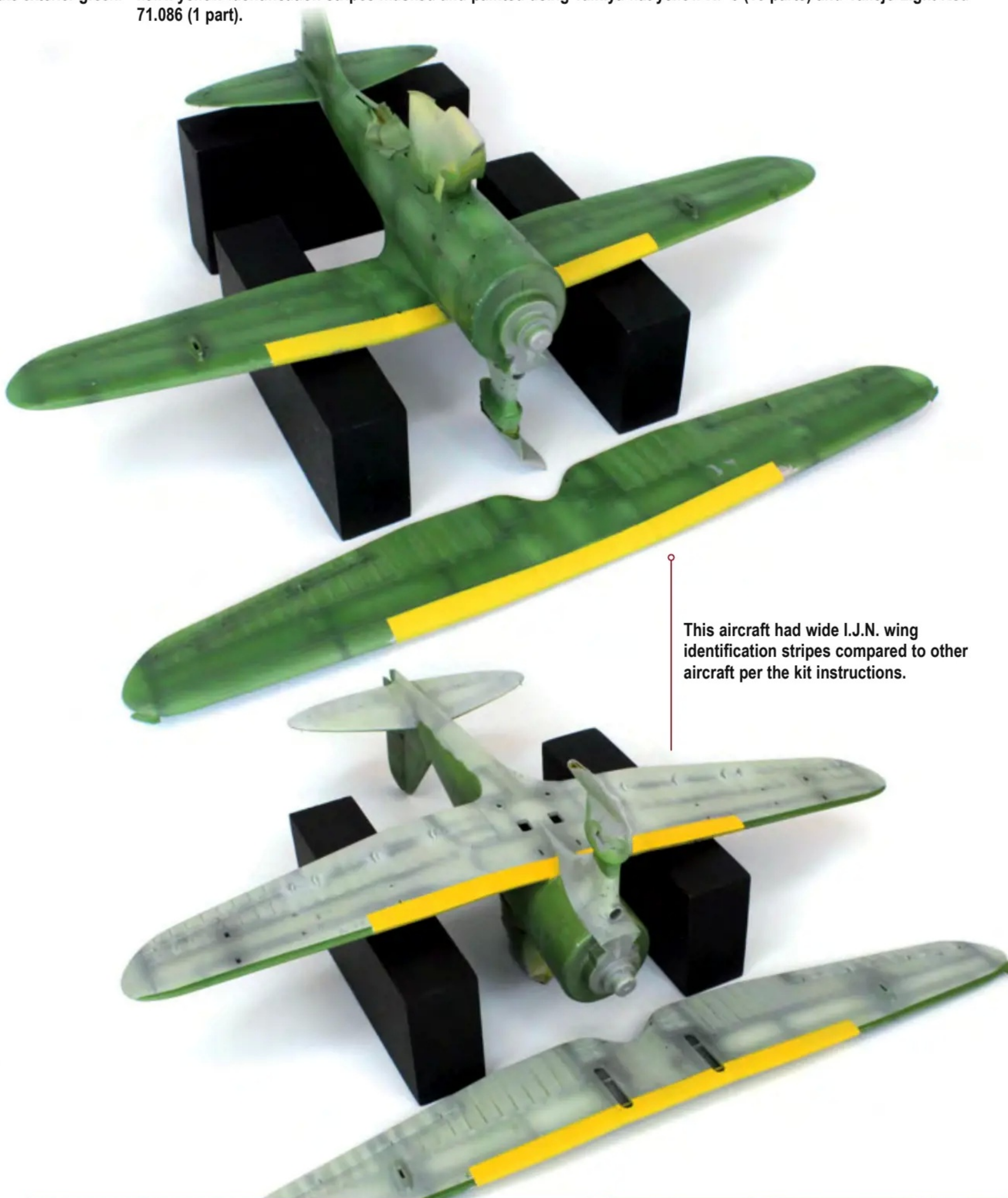
The first process I complete at the start of any modelling project is develop paint colours, mix ratios and decide decals to be used. This works out very well and gets me through the anxiousness of wanting to get to paint phase of any project. Painting and finishing processes are my favorite part of any model. To me, that is where the magic happens, but the last thing any modeller wants is to rush to paint a beautifully constructed model without having thought out the painting methods and colours and messing things up.

### EXTERIOR PAINTING

Master reference for camouflage and markings for WWII Japanese Navy aircraft is a book by Donald W. Thorpe, Japanese Naval Air Force Camouflage and Markings World War II. Simply the best reference I have come across and used as a master source since my fascination with history of the Pacific War began years ago. It details everything a modeller needs for reference on colours and markings. It also includes colour paint chip samples. It details the different green colour variations that existed in the I.J.N. during the war.

I am planning on building this Pete in the Green/Grey (defined as Type S, specifically the S-1 paint scheme, two solid colours as defined in the Thorpe book) noted on page 34. Paint schemes are noted again and visually illustrated on page 130 of the book with colour chip reference.

With the dark green upper surfaces, it is documented that Pete appeared in the S-1 paint scheme. Within this S-1 scheme, Thorpe notes that the green colour varied amongst three distinctively different green colours noted as Black Green N1, Dark Green N2 and Dark Grey Green N-3. As I have mentioned in ➔



This aircraft had wide I.J.N. wing identification stripes compared to other aircraft per the kit instructions.



Area circled is where green paint was accidentally removed. The dried green paint over dried chipping fluid is still delicate to the touch and can be removed with any moisture or masking tape. A coat of Lacquer based clearcoat will seal this painted surface and allow it to regain durability.

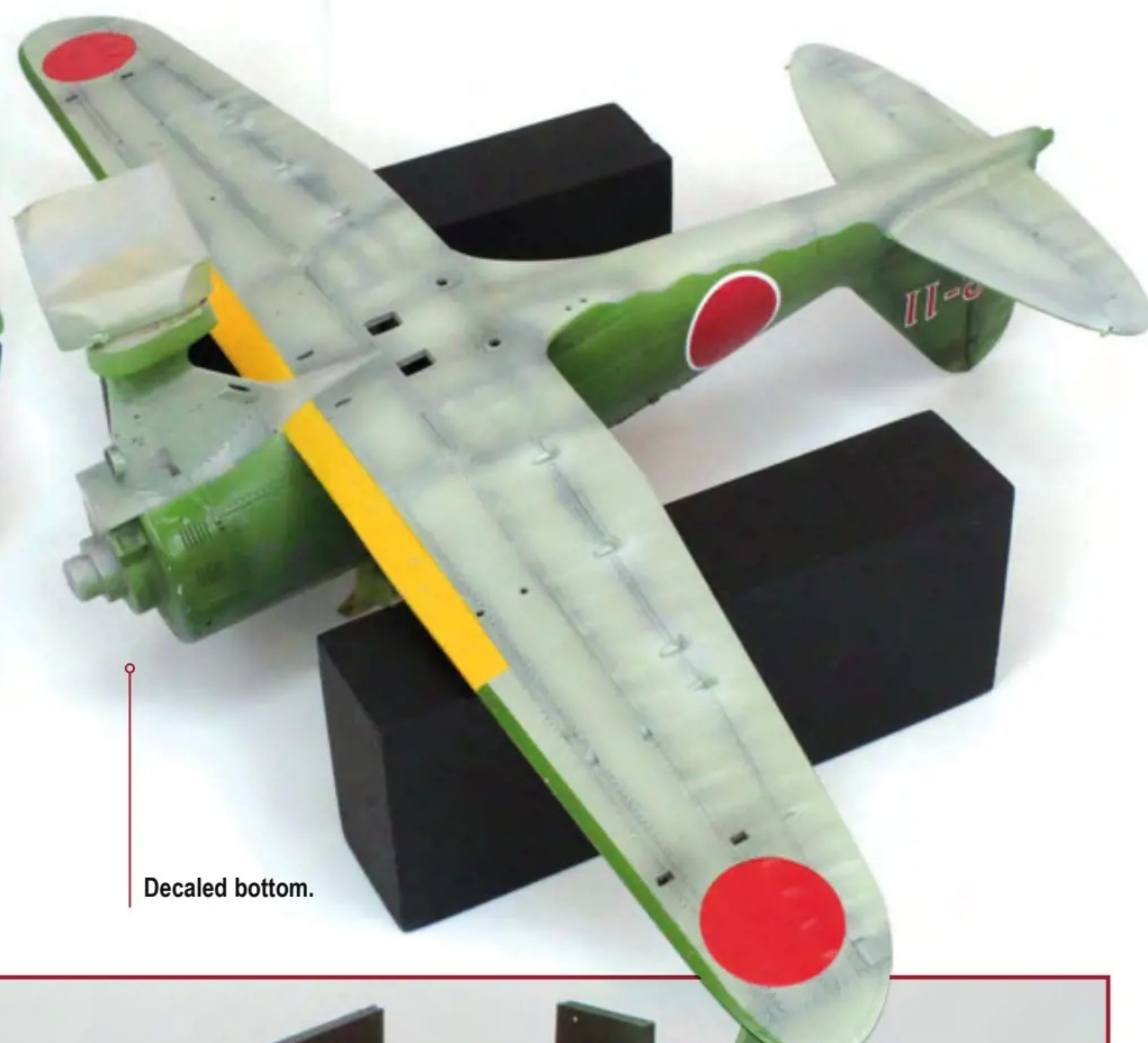


Extent of paint chipping is minimal but effective.





Decaled top.



Decaled bottom.

◀ previous articles, with Japanese Navy aircraft, I have read, and believe photos support the three different green colours appear on specific aircraft. An example is that F1M2 Pete, A6M2 Zeke and E13A Jake, appear in the lighter Dark Green N2 and Dark Grey Green N3 and just do not look correct in the Black Green N1, whereas N1K1 George, appears more correct in the Black Green N1. Visually, I see the black green appearing more prevalent later in the war years 1944 and 1945. It is always up to the modeller, but if you are building a model of an I.J.N. aircraft from 1941-44, using the N2 or N3 appear to correlate better to photographic evidence.

I develop paint colours before I glue a single plastic part together. For this reason, I developed my paint mixtures for the three different green colours and documented my mixtures for the Japanese Navy Air Force colours N1, N2 and N3. For this model, I chose the version of N2 Dark Green circled in red on the paint sample board. The exact mixture for this is Tamiya XF-11 JN Green= 4 parts, Tamiya XF-55 Deck Tan = 1 part and Tamiya XF-7 Lemon yellow= 2 parts.

Lower surfaces were painted with Tamiya I.J.N. Grey XF-12 straight out of the bottle.

## CANOPY

The F1M2 canopy can be very challenging as for the shape and amount of framing. Canopy masks from Dead Design Models are small, accurate for the model but vital to painting. Die cut canopy masks make a museum quality model possible.

The pilot's canopy, with its gunsight were attached after the cowling rigging and prior to upper wing getting glued as this area of the aircraft is too confined. The gunner's canopy was attached much later.

## DECALS

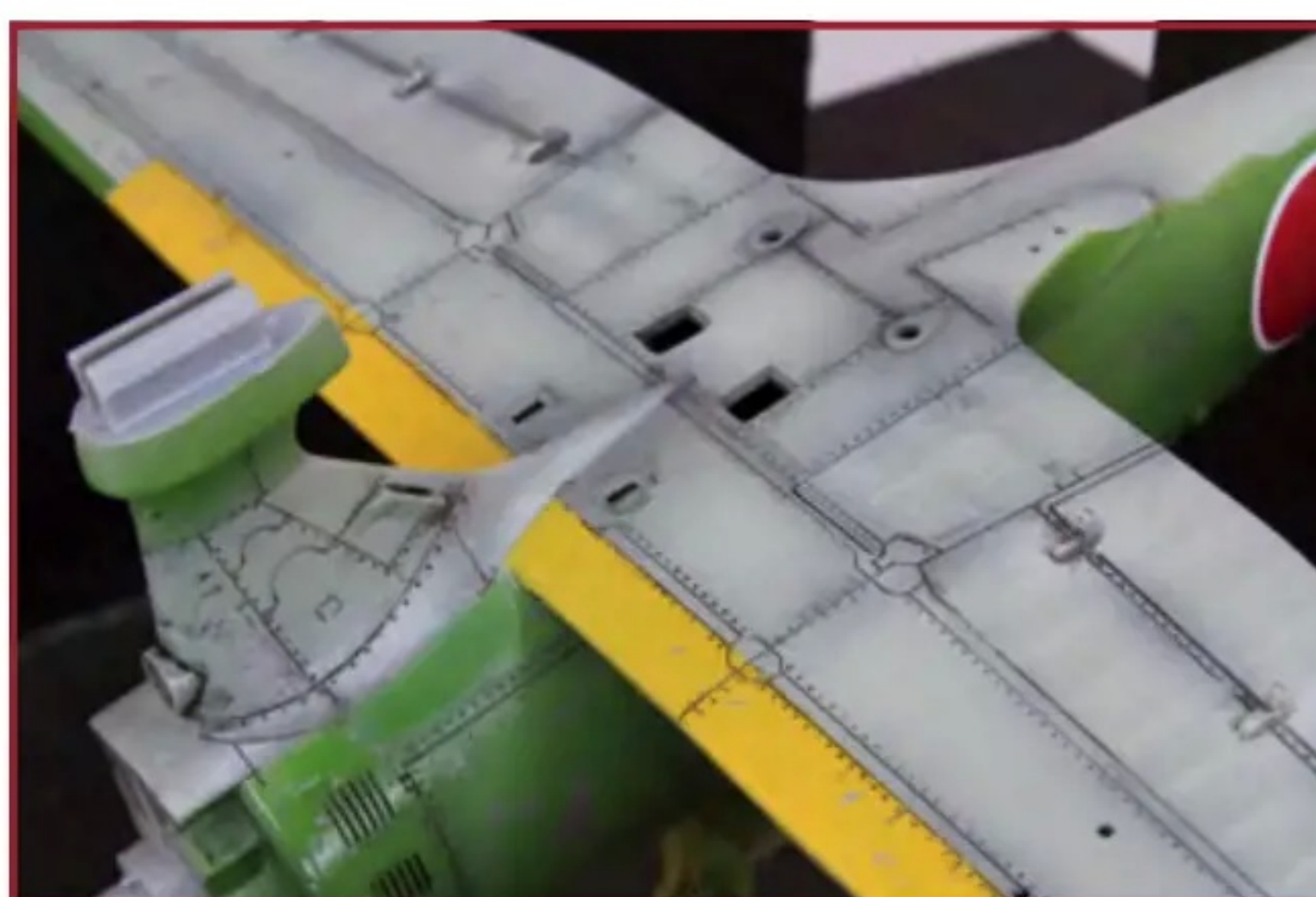
Kit provides markings for three different aircraft. Decals themselves are highest quality, colourful, thin, durable and sink into the recessed panel lines and rivets exceptionally. Apply the waterslide decals to the model in the normal fashion and seal with a water based clear gloss coat when finished and prior to application of panel line washes and weathering.



Panel line wash on top surfaces comprised of 3 different wash colours. Entire model was coated again with water-based gloss clear coat following panel line washes.



Close-up of medium grey panel line wash on green surfaces provides subtle depth contrast to the those painted surfaces. Black panel line wash was used on deep lines around ailerons.



Lower surface panel lines received only Tamiya black panel line wash. Pontoon received only Tamiya black panel line wash.



## PANEL LINE WASH

After decaling, entire model was sealed with a water-based gloss coat. Then panel line washes were applied to top surfaces. Mig Ammo medium tan MIG-1606 was used on green surfaces, red-brown MIG-1605 was used over wing insignia and Tamiya black was used on deep panel lines around ailerons and elevator control surfaces.

## WEATHERING

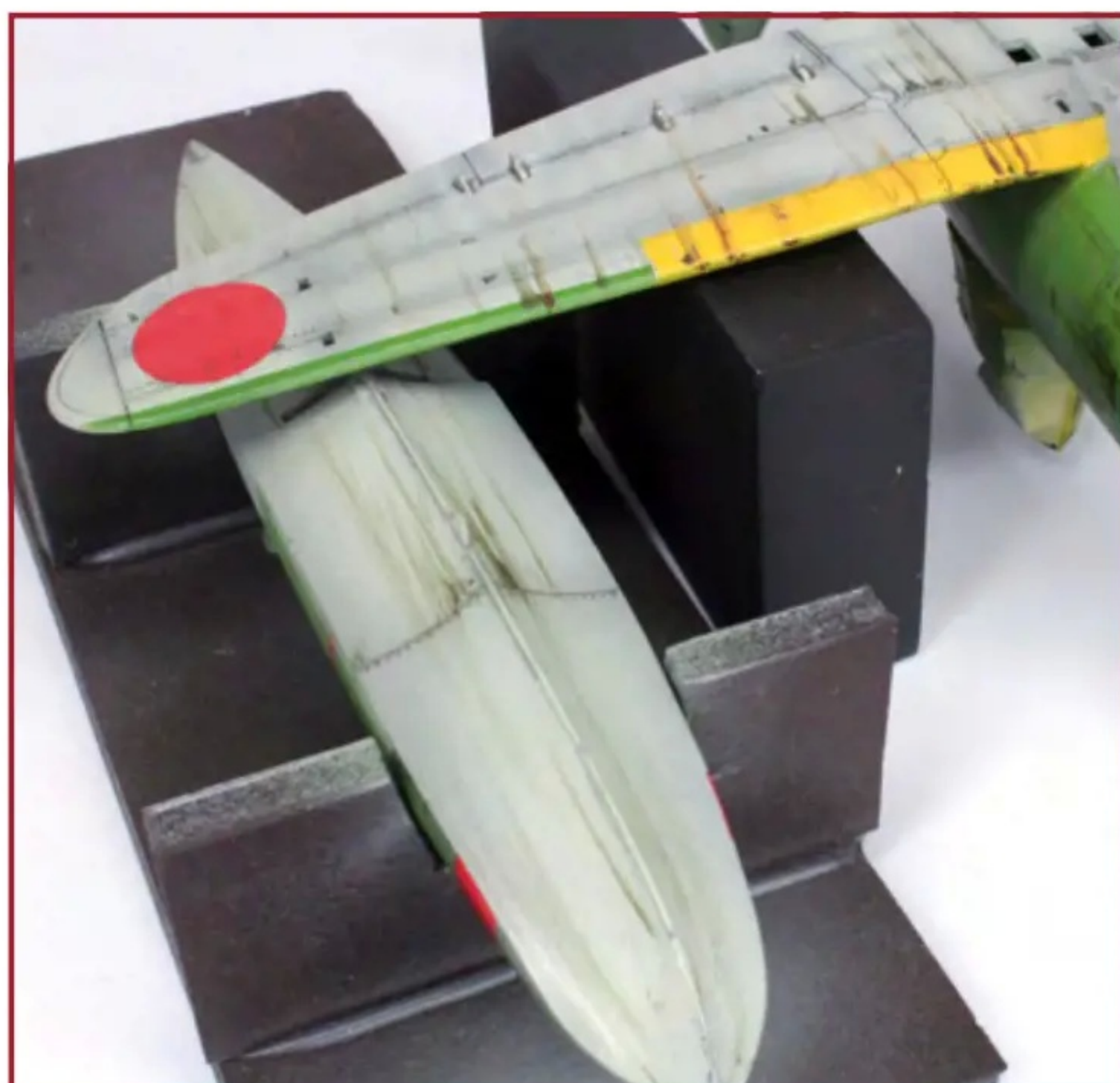
Seaborne I.J.N. aircraft experienced heavy exposure to the elements during their operations. The weathering was heavy. Weathering on my model consisted of panel line wash, acrylic paint exhaust stains, streaking of grime, dirt and rain marks. Each layer of elements was preserved with a layer of aqueous gloss coat. I always want my models to appear realistic, but I also want to add some interest to draw a viewer back for a 2nd and 3rd look. A boring looking model is easy to build, to add interest, I intentionally interject multiple colours with highlighting and weathering. Yes, I want to be accurate for the aircraft, but I have been known to push these visual elements. That is part of the learning and enjoyment of the hobby. I also introduced blue, greenish/black and a red/brown to the bottom of the fuselage. Concepts not new to master modellers, but my own spin on them. The exhaust stains are subtle, but comprised of 4 colours, brownish black, blue, rust orange and light grey. Each colour is on its own layer and protected with a clear gloss coat. This accomplishes two things, one, it preserves your work to that point and secondly the transparent layers create an actual thickness. This technique of applying thin transparent layers is the same developed by the Renaissance masters using oil paints. I am using the same techniques, but just on a 1:48 scale model. The technique pays visual dividends as I am rendering the surface of a 3-dimensional model the same way as I would a 2-dimensional illustration. Overall, there are 7-9 different transparent layers of paint, highlighting colours, decals, weathering, streaking and exhaust stains on this model and launching catapult. ➤



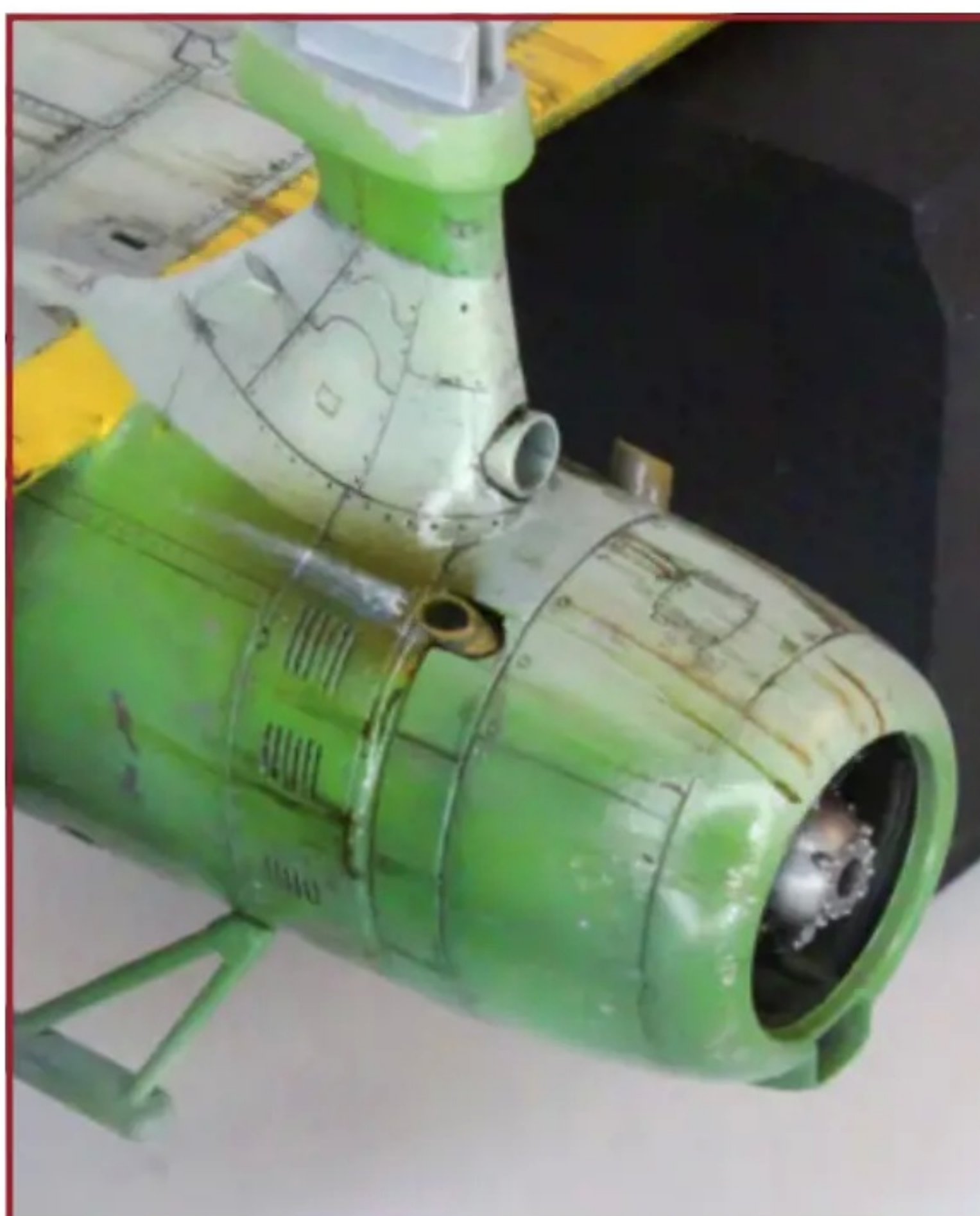
Streaking and weathering consisting of 2 colours, blackish green MIG-1206 and reddish brown MIG-1203, were added to upper surfaces and pontoon. Each colour is on its own layer and separated by a protective clear gloss coat.



Streaking grime on lower surfaces is result of difficult seaborne operation conditions by the real aircraft.



The key to this type of weathering is keeping it random and not to overdo the effect.



Weathering on lower surfaces shows extensive streaking and staining from harsh operating conditions. The green streaking affects were applied, sealed with a clear gloss coat, then the red/brown streaking was added followed by another clear gloss coat.



Wing struts added following weathering and prior to adding cowling photo-etch rigging, pilot's canopy and gunsight.





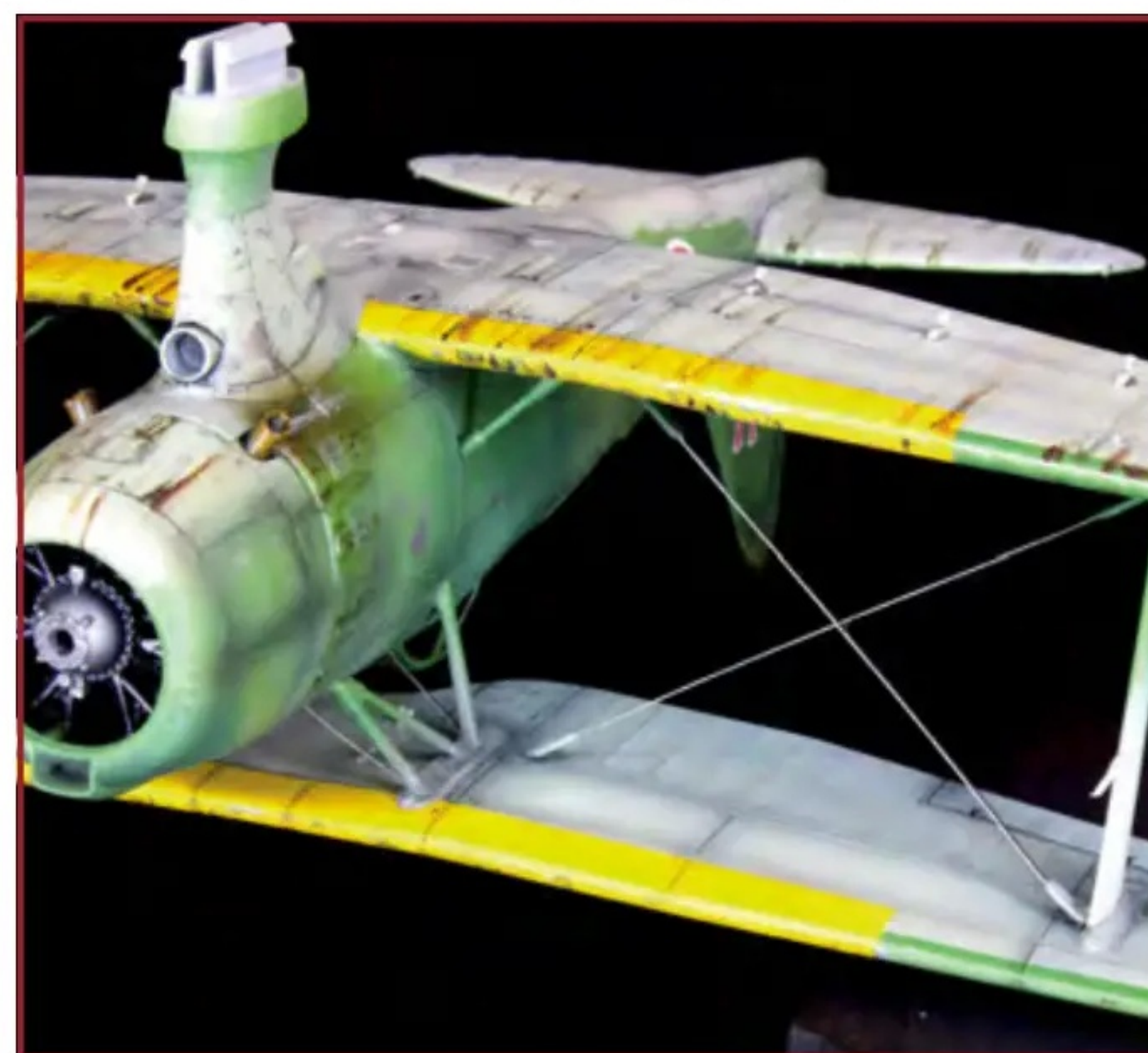
Upper wing and pontoon were test fitted many times before permanent attachment to fuselage and wing struts.



Fitting and gluing cowling photo-etch rigging, pilot's canopy and gunsight prior to attaching upper wing permanently was a must. This is where studying the instructions paid off as I chose the best assembly sequence for installing these fine detail parts without destroying them with my clumsy hands. I work from the centre-line outward when attaching these pieces. Note the sighting ring and needle photo etch parts attached to the gun sight plastic part.



X Rigging connecting upper to lower wing added.



Wing attachment points were drilled in wings to help placement of X Rigging.

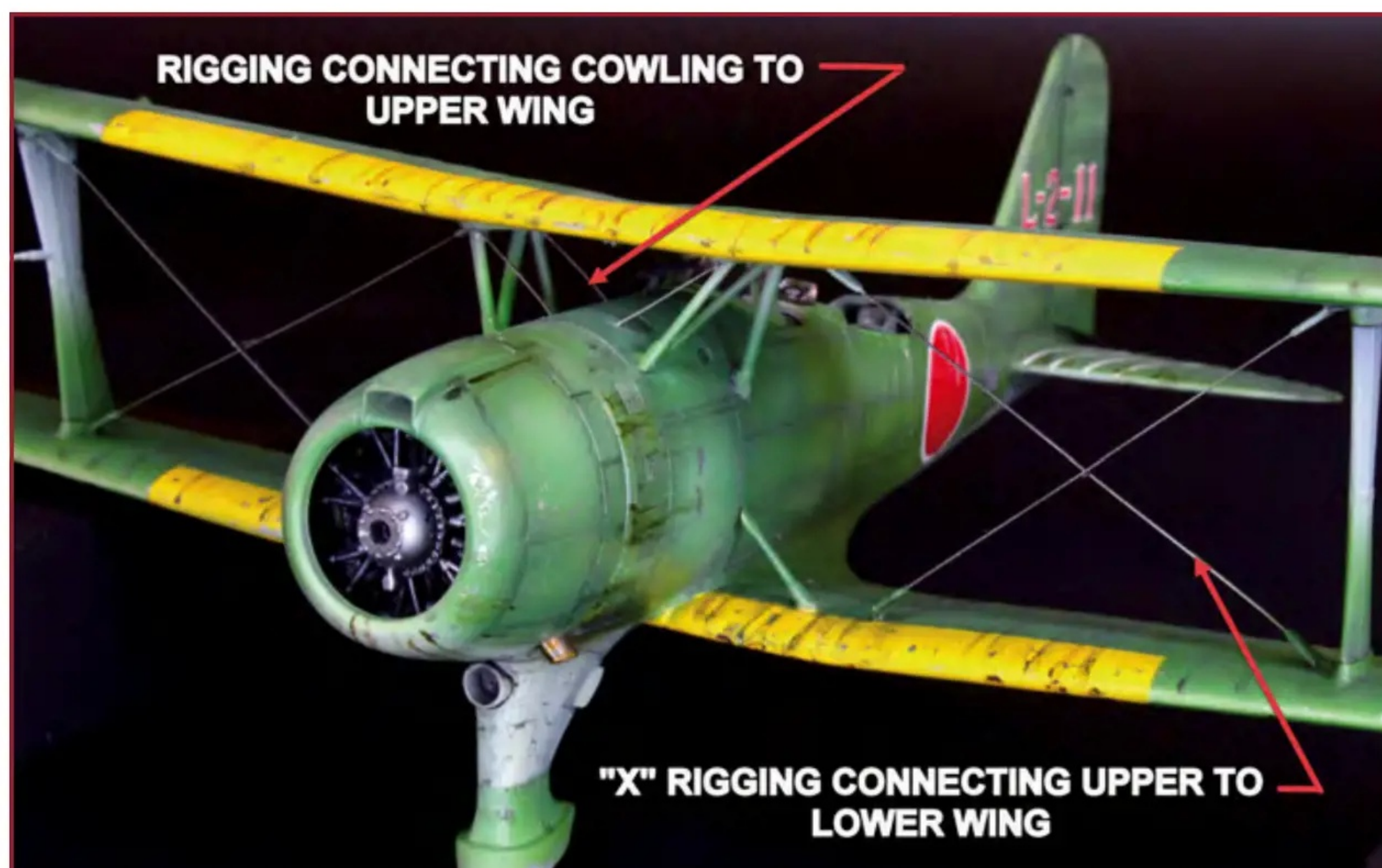
***"THIS AIRCRAFT WAS MITSUBISHI'S LAST BIPLANE. ITS VERSATILITY ALLOWED IT TO PERFORM RECONNAISSANCE, SEA PATROL, CONVOY ESCORT AND LIGHT BOMBER DUTIES WITH A MODEST BOMB LOAD..."***

#### ◀ **MODEL DISPLAY**

Based on my reference photo of Pete on the catapult ready for launch, the aircraft is easily 15 feet above the ship-deck with the launching crew gazing upward. All the pent-up energy with the plane's surging engine, catapult ready for firing and anticipation of the crew is quite a dynamic scene. Plenty of air below the plane's wings as it is perched high above ready for action. I wanted my model to capture some of that sense with the catapult and plane well above the table top with air beneath its wings. Having the model in such an asymmetrical yet commanding position upon a pedestal, like a piece of sculpture, creates a more artistic feel to the presentation.

#### **CONCLUSION**

This is a great build either straight from the box or adding the detailed photo-etch parts along with the after-market catapult. Building a bi-wing seaplane with all its intersecting bumps, bulges, struts and rigging is just a methodical process. It is a very high detail build but very manageable due to the kit's small size. All the subassemblies, catapult, trolley and cradle do not overwhelm your workbench despite the size of the catapult. •



Clearly seen are rigging attaching cowling to upper wing and the longer X rigging connecting lower to upper wing.





Attaching central pontoon, wing pontoons and bomb racks.

Rear canopy was attached at same time as pontoons.

Detail of beach landing trailer is good out of the box. Black and red/brown washes were applied to the trailer frame.





零式水上観測機

一一型

(日本海軍 水上観測機)

Mitsubishi F1M2  
TYPE ZERO  
OBSERVATION SEAPLANE  
(PETE) MODEL 11  
(JAPANESE NAVY OBSERVATION SEAPLANE)

1:48 SCALE KIT



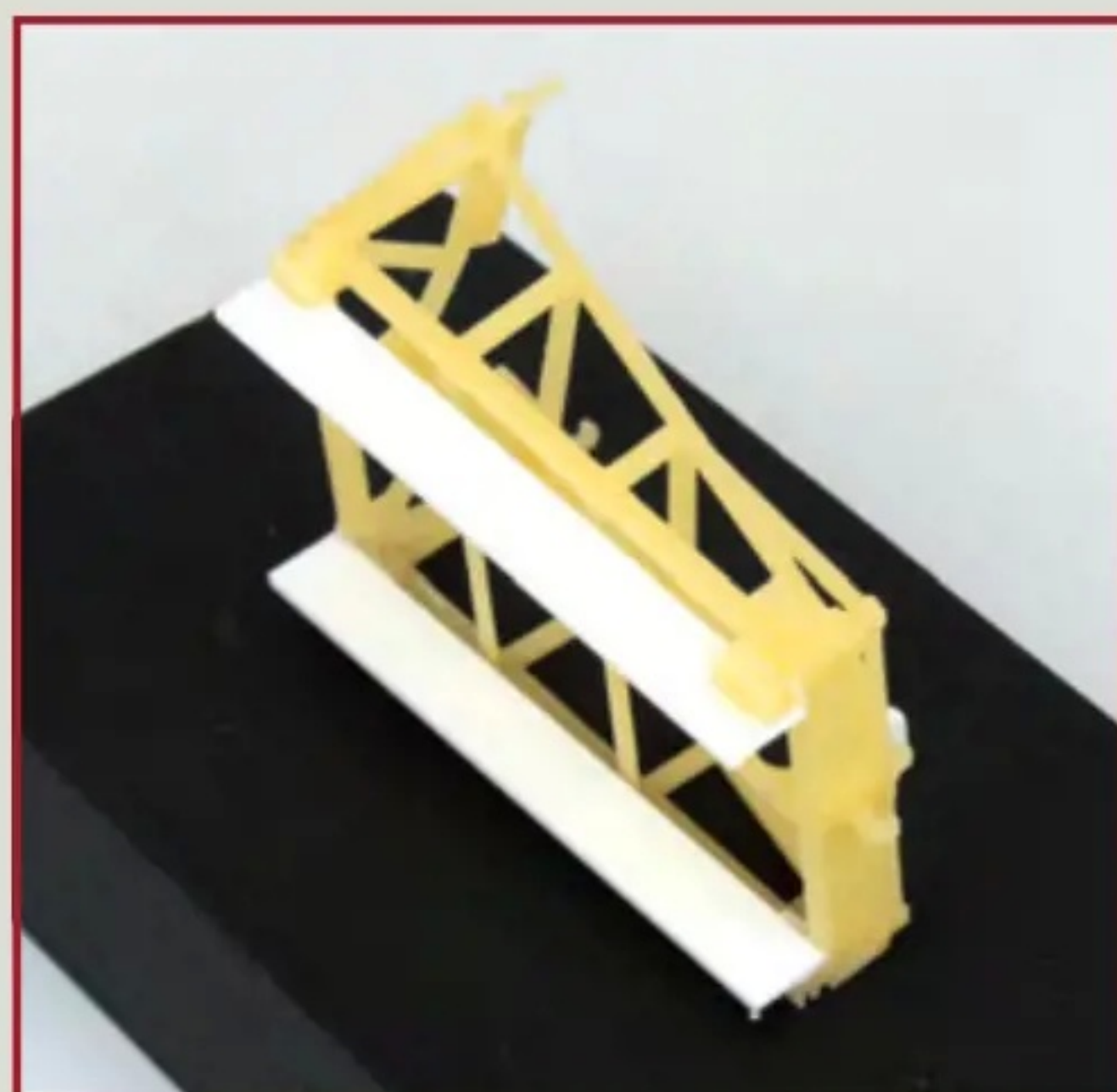
HASEGAWA CORPORATION



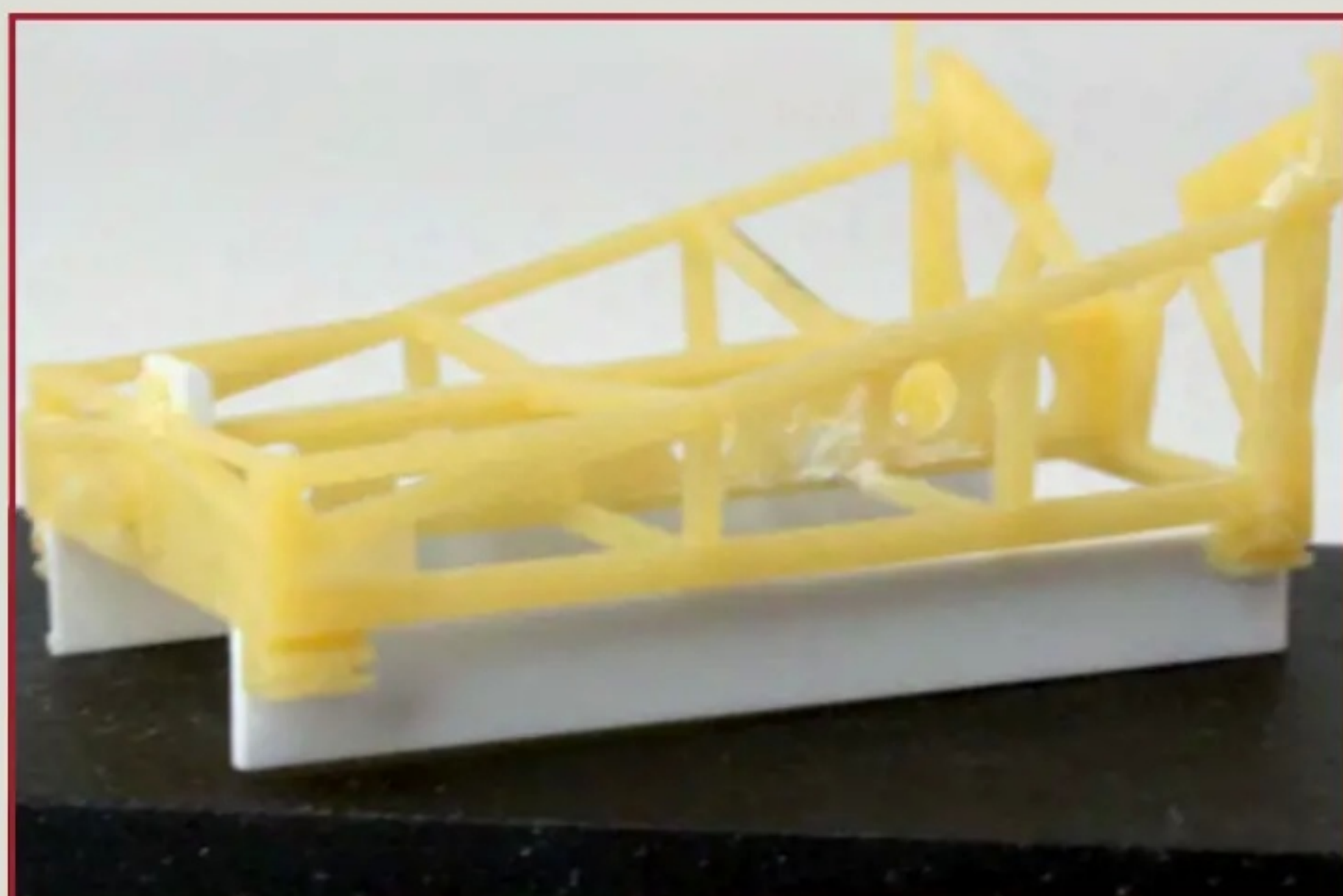








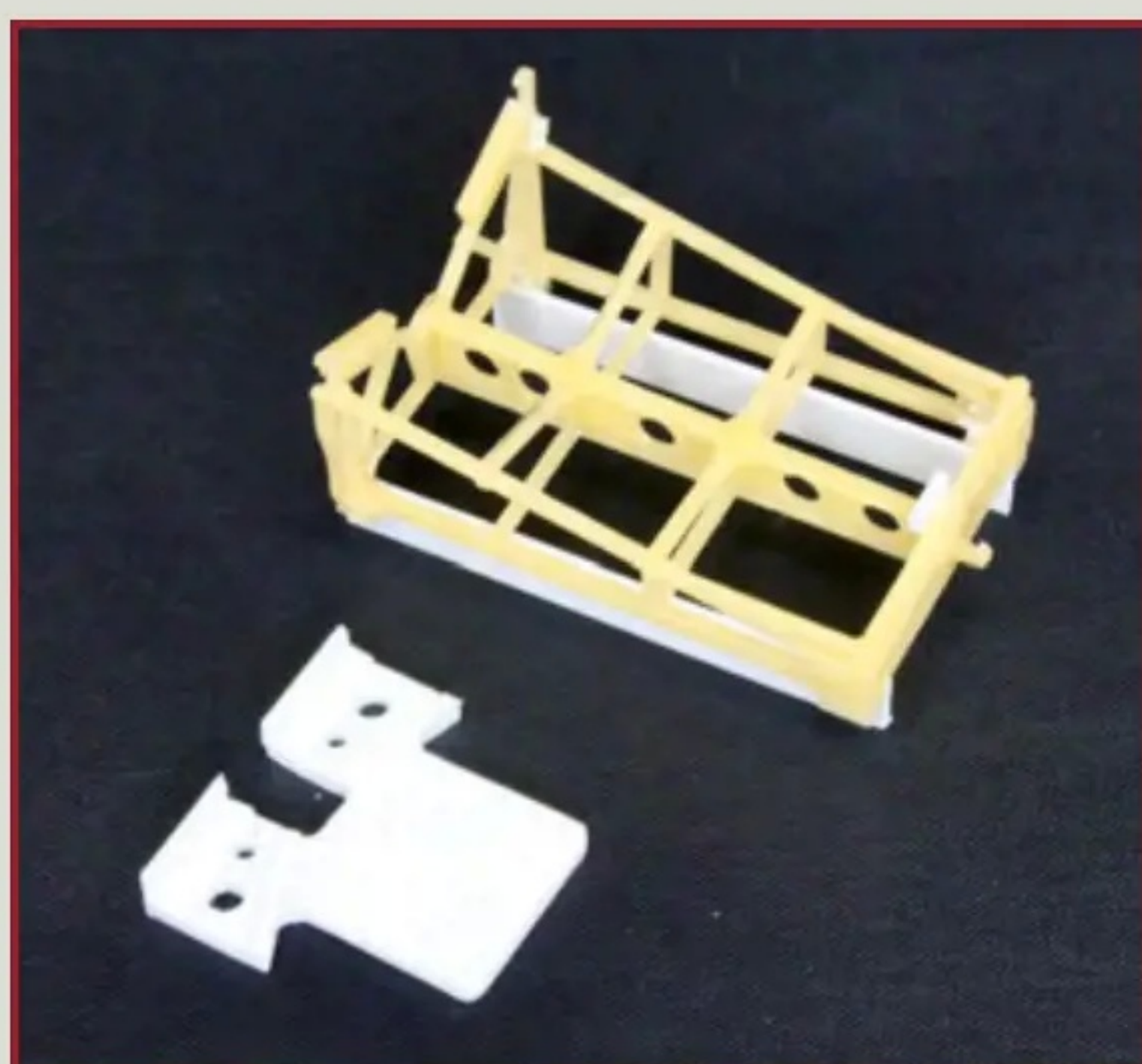
Cradle with styrene rails added to track area.



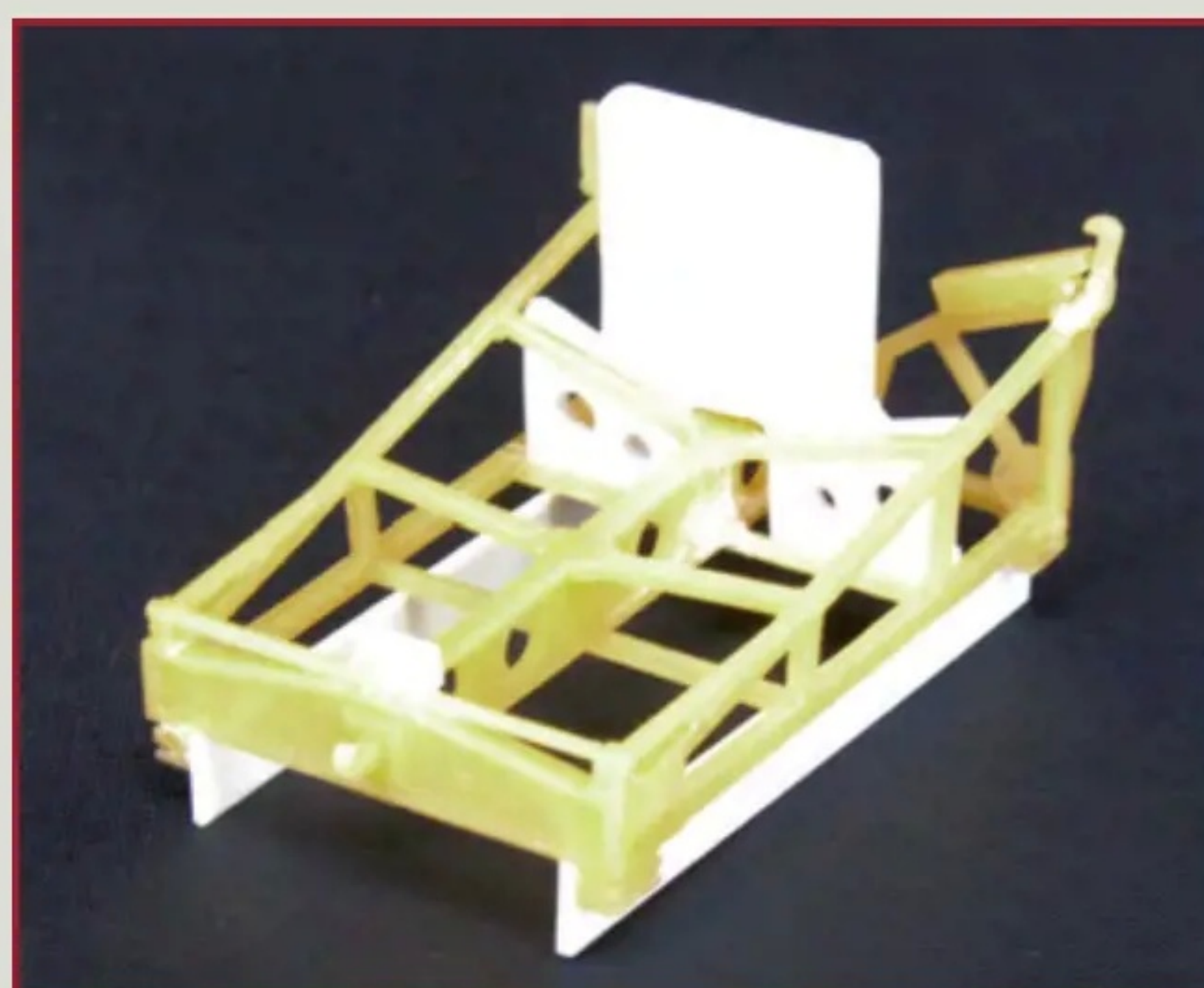
Added track rails allow cradle assembly be secured to both catapult and trolley.



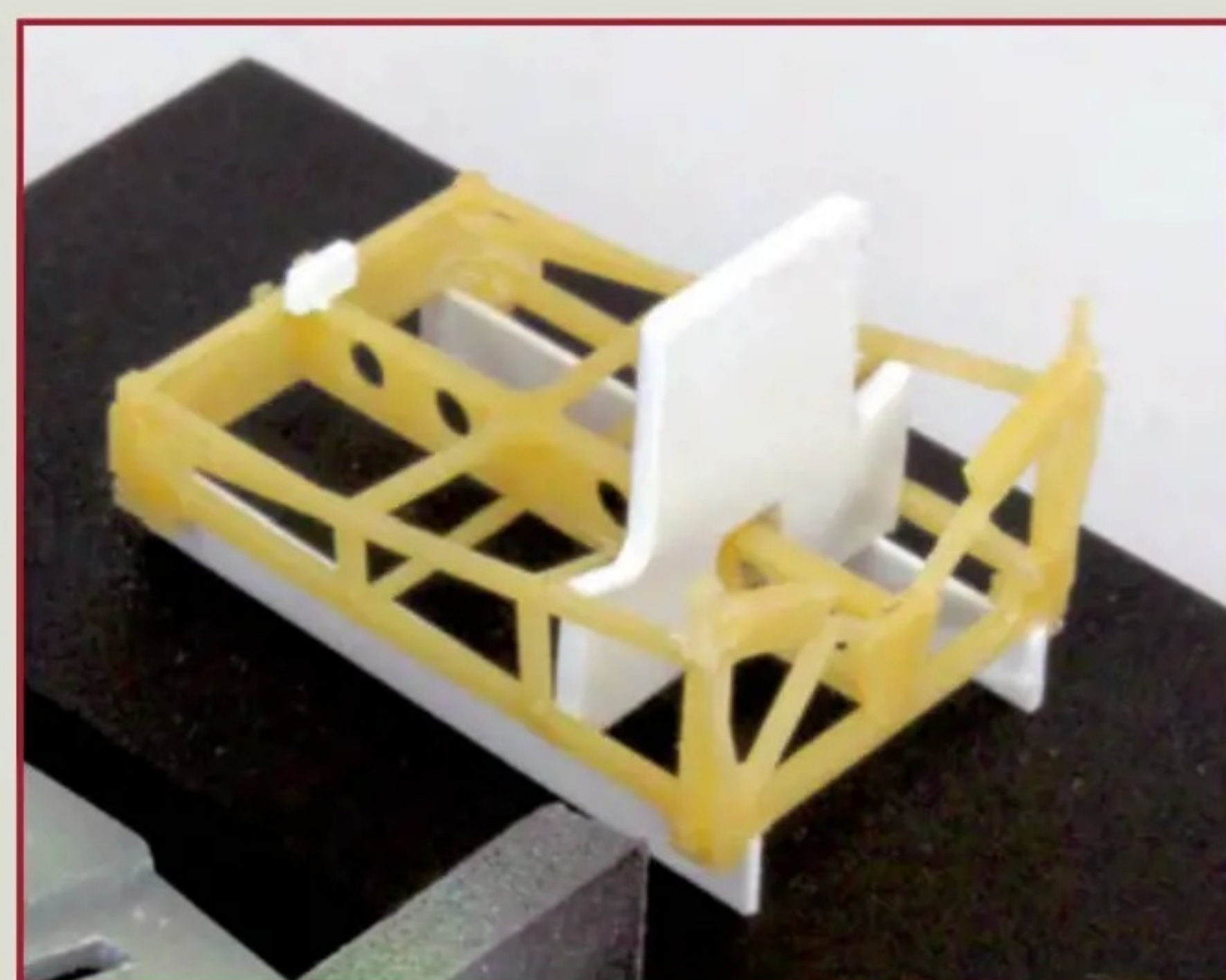
Added track rails to cradle increase robustness of assembly to trolley.



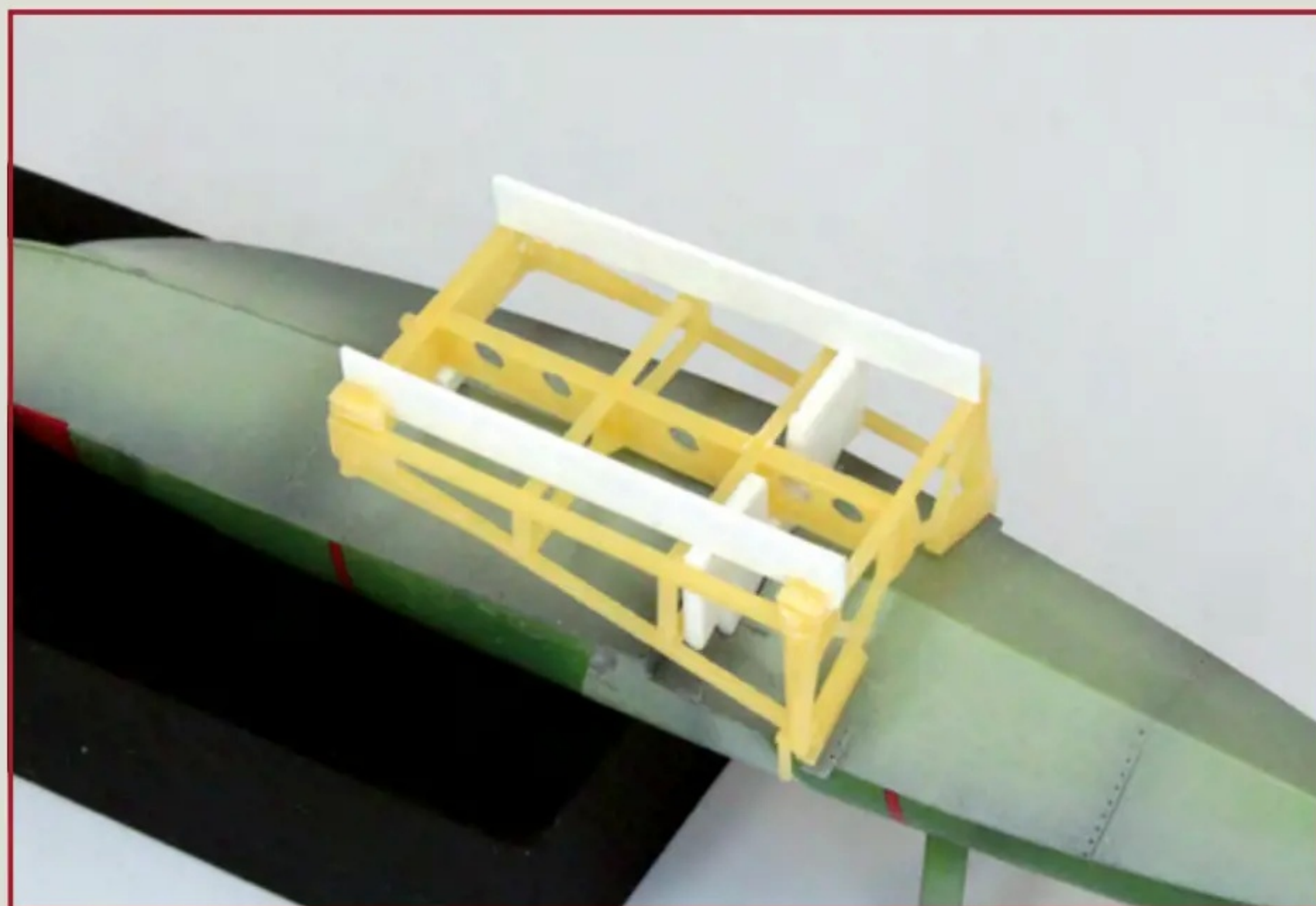
A key was fabricated to improve robustness of cradle to aircraft assembly.



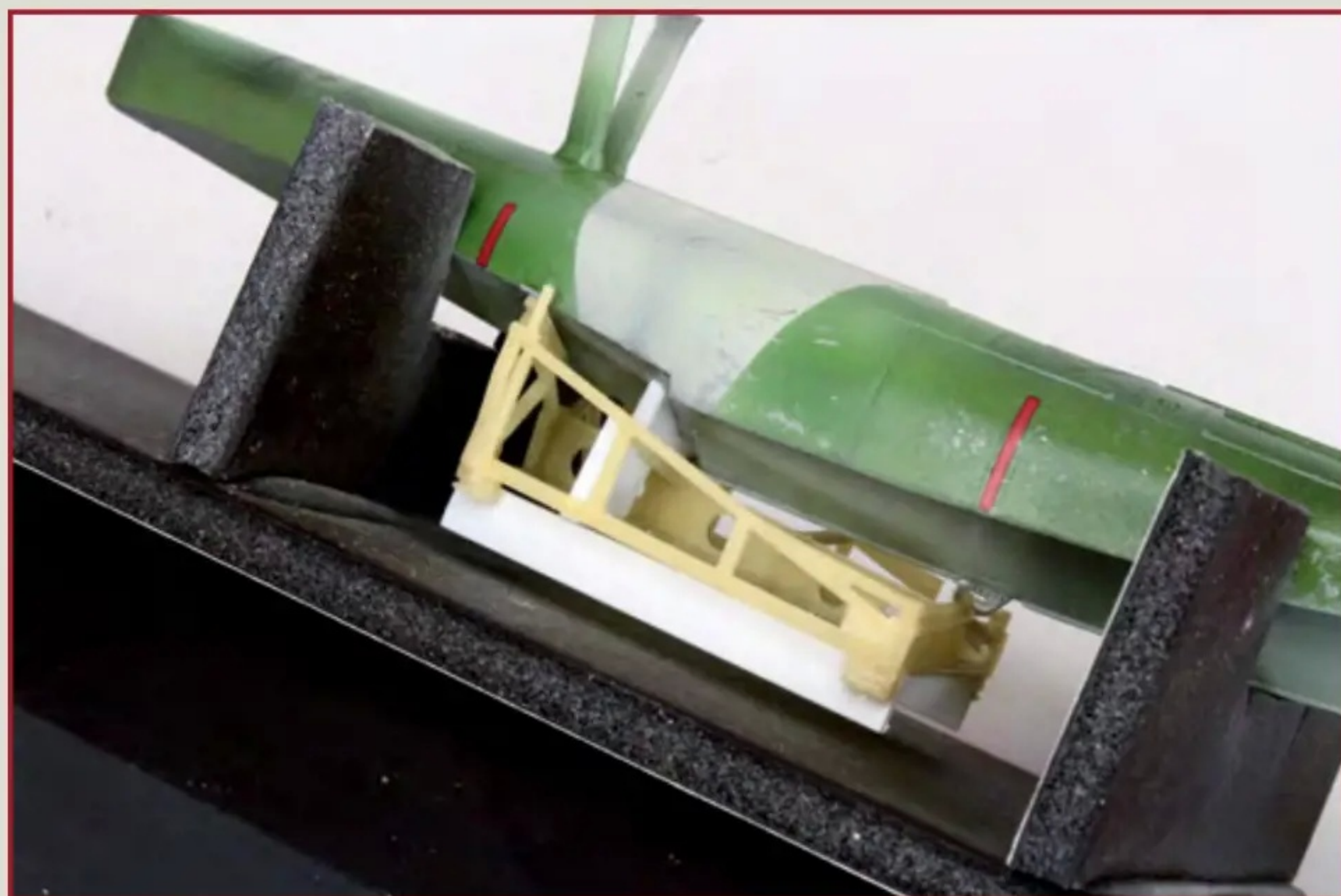
Completed cradle assembly.



View of cradle key and the slot cut into the main pontoon.



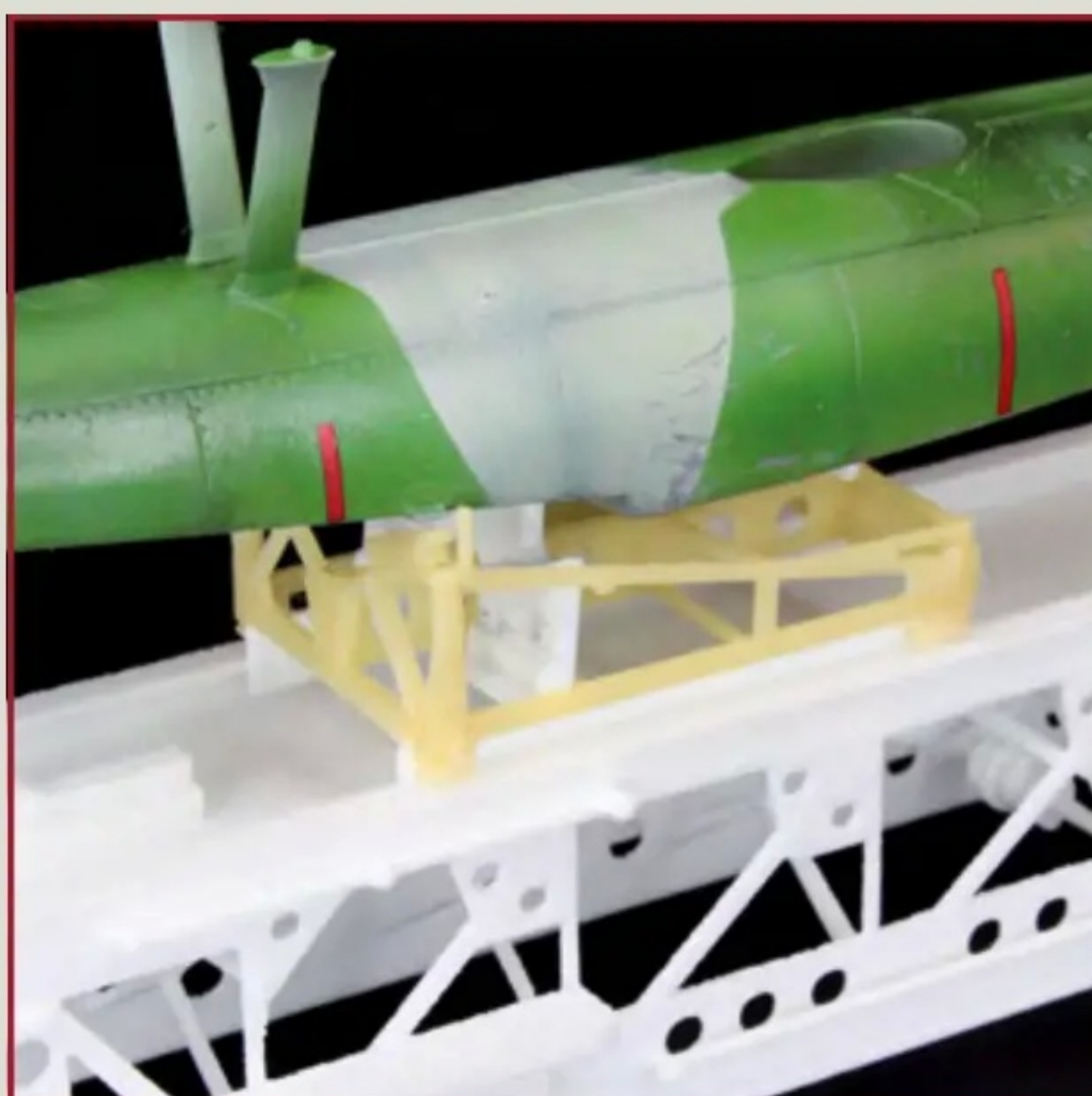
Fitting cradle to main pontoon.



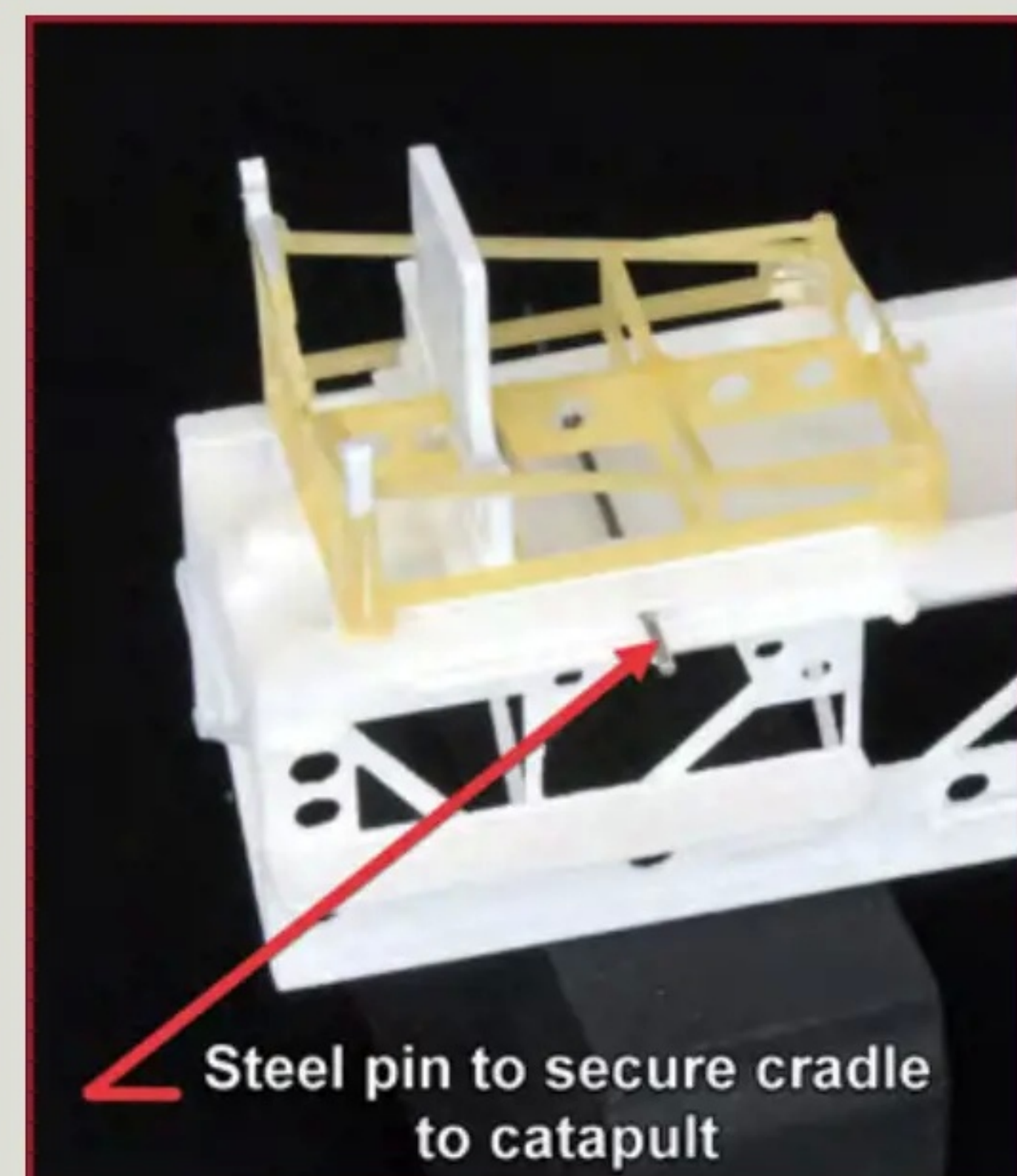
Cradle to pontoon assembly is significantly more robust.



Trolley, cradle and pontoon assembly.



Catapult, cradle and pontoon assembly.



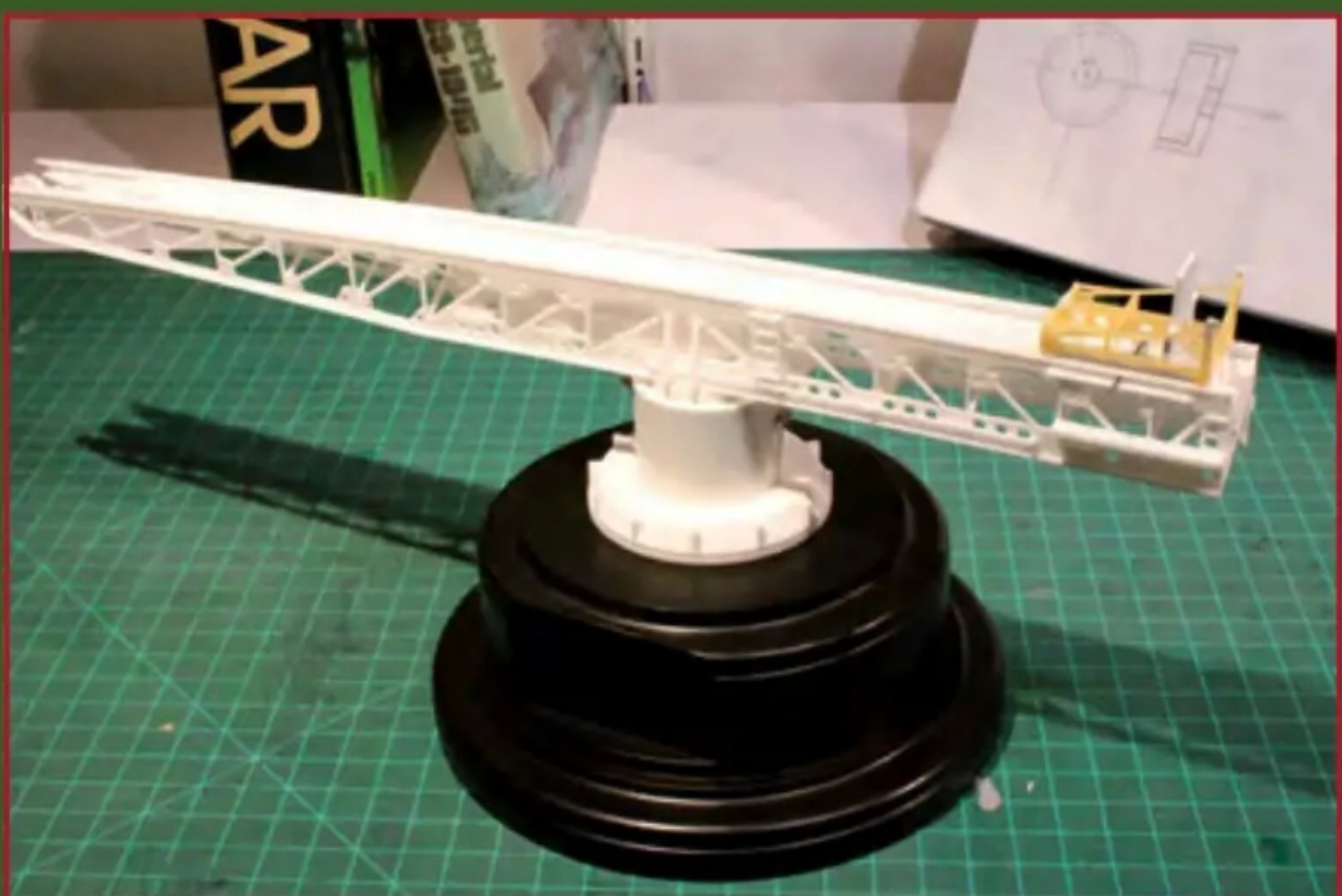
Steel pin to secure cradle to catapult

Cradle to catapult assembly secured by drilling and inserting a 0.040 dia. steel pin to attach the parts.

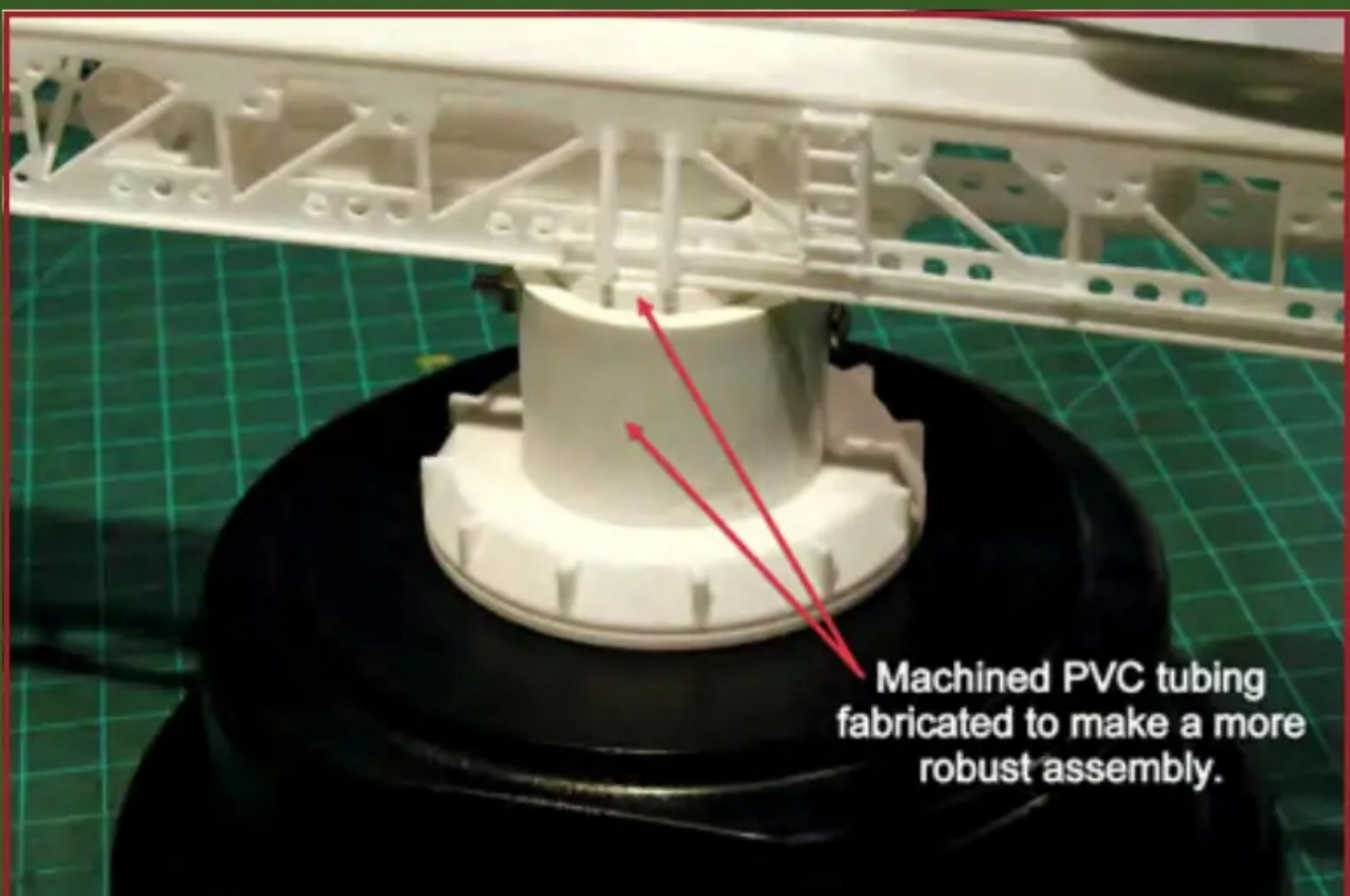




Test fitting aircraft, cradle and catapult assembly.



Test fitting catapult, base, custom machined PVC connectors and seaplane cradle.



Machined PVC tubing fabricated to make a more robust assembly.

Machined PVC tubing was used to connect and strengthen turntable to base of catapult.

The first trial fit of the plane, catapult and base.







Ready for launch!

**"THIS IS A GREAT BUILD EITHER STRAIGHT FROM THE BOX OR ADDING THE DETAILED PHOTO-ETCH PARTS ALONG WITH THE AFTER-MARKET CATAPULT..."**





## MODELSPEC

Hasegawa :48 F1M2 Type Zero Observation Seaplane Pete

Part count: 96 injection moulded parts

**SKILL LEVEL:** Advanced (out of the box)

### Accessories Used:

- Wing Support struts and rigging: Hasegawa Item QG32 (72132) 1:48 | etch parts for F1M2 Type Zero Observation Seaplane (Pete) Model 11 kit.
- 1:48 IJN deck catapult, trolley and cradle by diStefan 3D Print LLC, Torrance CA
- Canopy Masks- F1M2 Pete - VM48-087, Dead Design Models, Czech Republic
- Machine Gun- Vector Models, Lewis Japanese Type 92- 7.7mm machine gun

### Tools and Modelling Products Used:

- Tamiya Extra Thin Cement
- Great Planes Super Glue
- Tamiya Masking Tape
- Folding Fixture- 5 Speed Hold and Fold, tool # SMS004- The Small Shop.com

### Paints and Finishing Products Used:

- Tamiya Aerosol Paints– Fine Grey Primer
- Tamiya Acrylic Paints: XF-11 J.N. Green, XF-12 (I.J.N.) Japanese Navy Grey, XF-55 Deck Tan, X-28 Green; X-7 Red; XF-2 Flat White; XF-64 Red Brown, XF-8 Lemon Yellow, XF-71 Cockpit Green, XF-8 Flat Blue, XF-87 I.J.N. Grey (Maizuru Arsenal)
- Vallejo Acrylic Paints –RAL9021 71.251, NATO Black: 71.119, RAL9002- White Grey 71.121, Beige 71.074, Light Red 71.086
- Microscale Industries Micro Gloss and Micro Flat clear model finishes
- Winsor & Newton Burnt Umber oil paint.
- Tamiya Panel Line Accent Colour (Black and Grey)
- Alclad II Lacquers; ALC-111 Magnesium, ALC-104 Burnt Metal; ALC-123 Exhaust Manifold; ALC-103 Dark aluminium
- MIG Ammo Heavy Chipping Fluid
- Testors Glosscote Top Coat, lacquer clear coat
- MIG Ammo Medium Tan MIG-1606 panel wash
- MIG Ammo Red-Brown MIG-1605 panel wash
- MIG Ammo- Streaking Grime MIG-1203
- MIG Ammo- Dark Streaking Grime MIG-1206

### References:

- Japanese Naval Air Force Camouflage and Markings, World War II, Donald W. Thorpe. 1977

⊕ High level of detail; high quality moulding; precise fit and accurate recessed panel lines. Fabric covered surfaces are nicely defined and moulded in contrast to aluminium panel surfaces. Included is a nicely detailed beach landing trailer.

⊖ Cowling assembly is a little precarious as it is comprised of three pieces.

**RATING:** 8 out of 10



# NSW SCALE MODEL COMPETITION AND EXPO 2024

The Editor heads south of Sydney to visit the 2024 NSW Scale Model Competition and Expo.

I visited the 2024 NSW Scale Model Competition and Expo in May this year, hosted as usual by the Illawarra Plastic Modellers Association and open to all modellers, whether club members or not.

The venue was the Illawarra Sports Stadium. This is a large indoor and outdoor facility with two games of women's Netball being played on one side, and the model show being held on the other to a unique soundtrack of squeaking rubber-soled shoes and umpires whistles. The new venue is big and bright.

The standard of competition entries was as high as ever, with a good variety of subject matter and scales, including aircraft, armour, ships, submarines, figures, cars and more. Competition entry numbers were up too.

The NSW Scale Model Expo traditionally encourages younger models to participate and this year was no exception, with an impressive standard of junior models in competition.

More than a dozen traders were also on hand; and the swap and sell tables were as busy as always.







Airfix 1:48 P-51D Mustang-themed category.



Kinetic 1:48 F-18A Worimi Hornet.



The venerable 1:72 Fujimi Messerschmitt Bf 110 C.





HobbyBoss 1:72 Lockheed U-2C.



Eduard 1:72 MiG-21PFM.1



Dragon 1:72 Gloster Meteor F.3.



Modelsvit 1:72 Mirage IIIEA.



Platz 1:72 F-86 Sabre.



Platz 1:72 T-33A JASDF 40th Anniversary.



Eduard 1:48 Focke-Wulf Fw 190 A-5.



Eduard 1:48 Messerschmitt Bf 109 G-10.





GWH 1:48 Sukhoi Su-35S Flanker E.



Kitty Hawk 1:48 North American FJ-2 Fury.



Tamiya 1:48 F-14A Tomcat.



Tamiya 1:48 F-14A  
"The Final Countdown"  
Tomcat.



Special Hobby 1:48 SAAB Viggen.



Dassault Mirage 2000C.

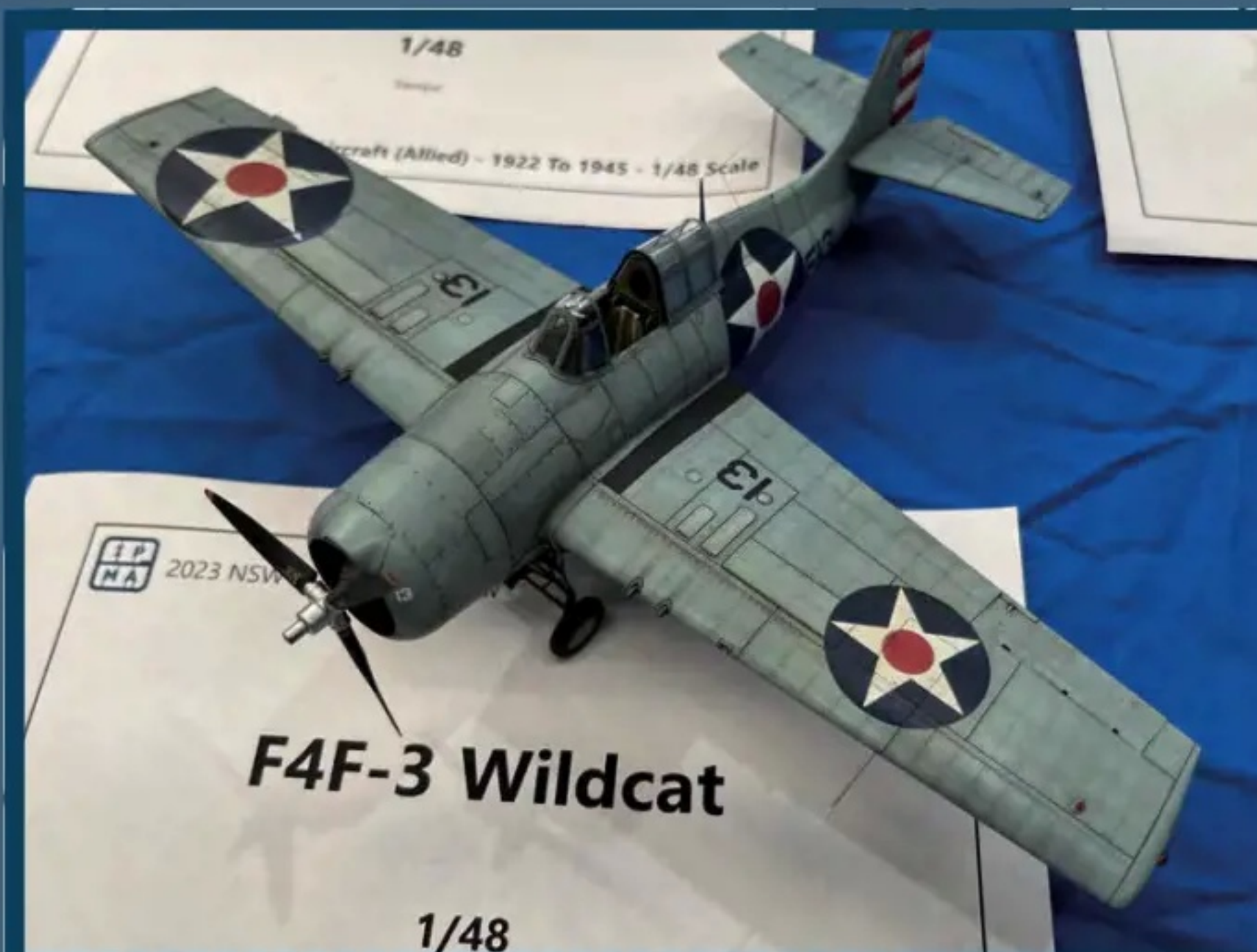




Eduard 1:48 Hawker Tempest Mk.II times two!



HobbyBoss 1:48 Tucano.



Eduard 1:48 F4F-3 Wildcat.



Hasegawa 1:48 P-40N Kittyhawk.



Tamiya 1:48 Beaufighter Mk.21



Classic Airframes 1:48 Gloster Meteor F.8 RAAF "Halestorm".





SH-3H Sea King (The Final Countdown).





# INSTRUMENT RA

The Editor builds Eduard's 1:4 scale Messerschmitt Bf 110 Instrument Panel

**W**hen Eduard released their kit no. R0005 Bf 110 C/D/E Royal Class in 2008, they included an impressive bonus – a 1:4 scale Bf 110 C instrument panel kit.

Yes, that's right, one quarter scale.

This is a cleverly executed idea that really

takes advantage of Eduard's state-of-the-art moulding capabilities and their innovative colour photo-etch technology.

A basic panel is supplied as a single piece, with individual parts for bezels, screws, switches and handles. The instruments themselves are made up from a combination

of self-adhesive stickers and colour photo-etched parts. Each instrument is covered by a clear plastic lens.

There are no special skill required to build the panel - just make sure you keep glue away from those clear instrument lenses!

At 20cm wide, the panel is big enough to





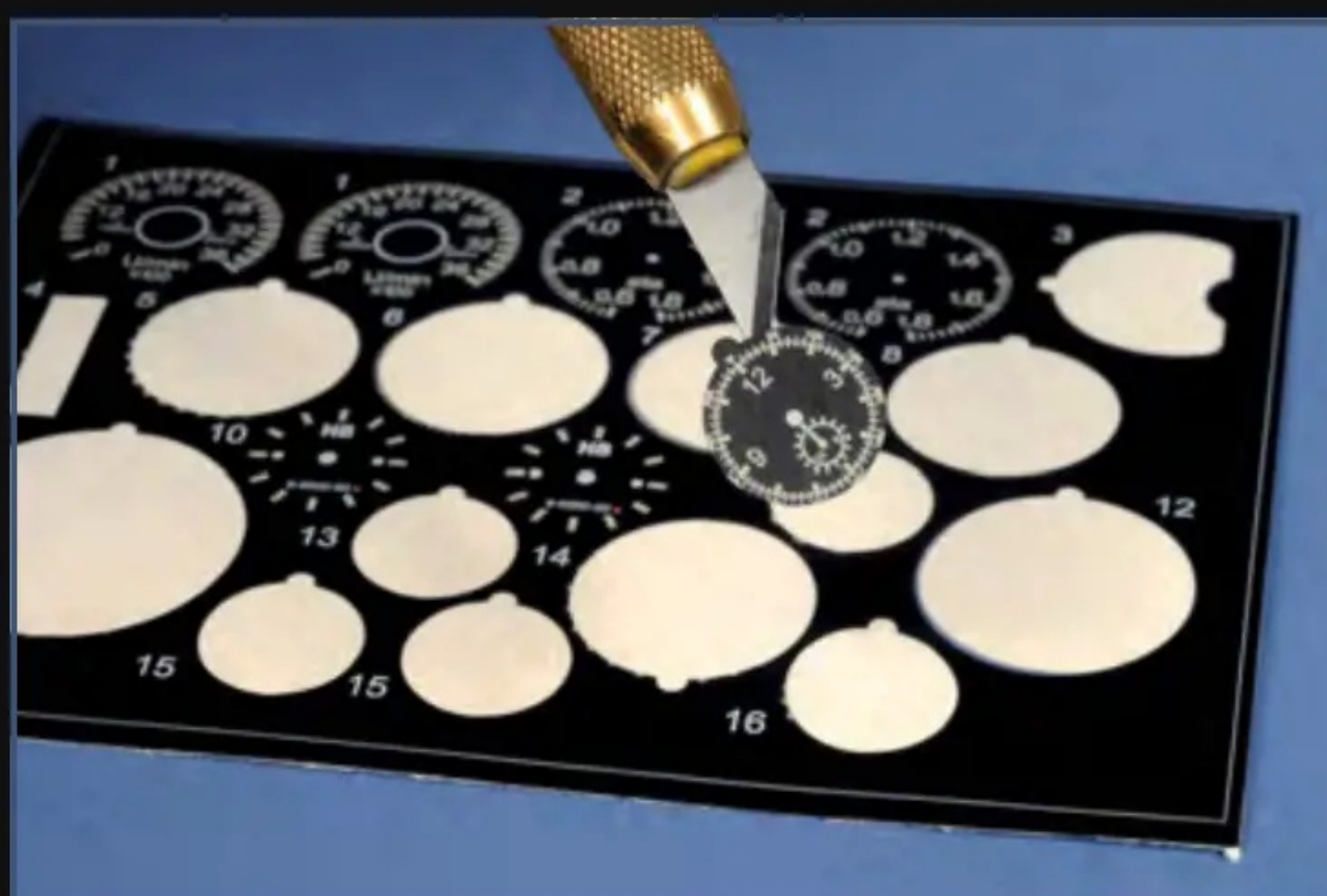
# TING

make an impressive display piece for your model room or den.

The panel has since been offered as a separate kit, so you should be able to find one somewhere! •



The plastic base was sprayed in an overall coat of Tamiya acrylic XF-63 German Grey.



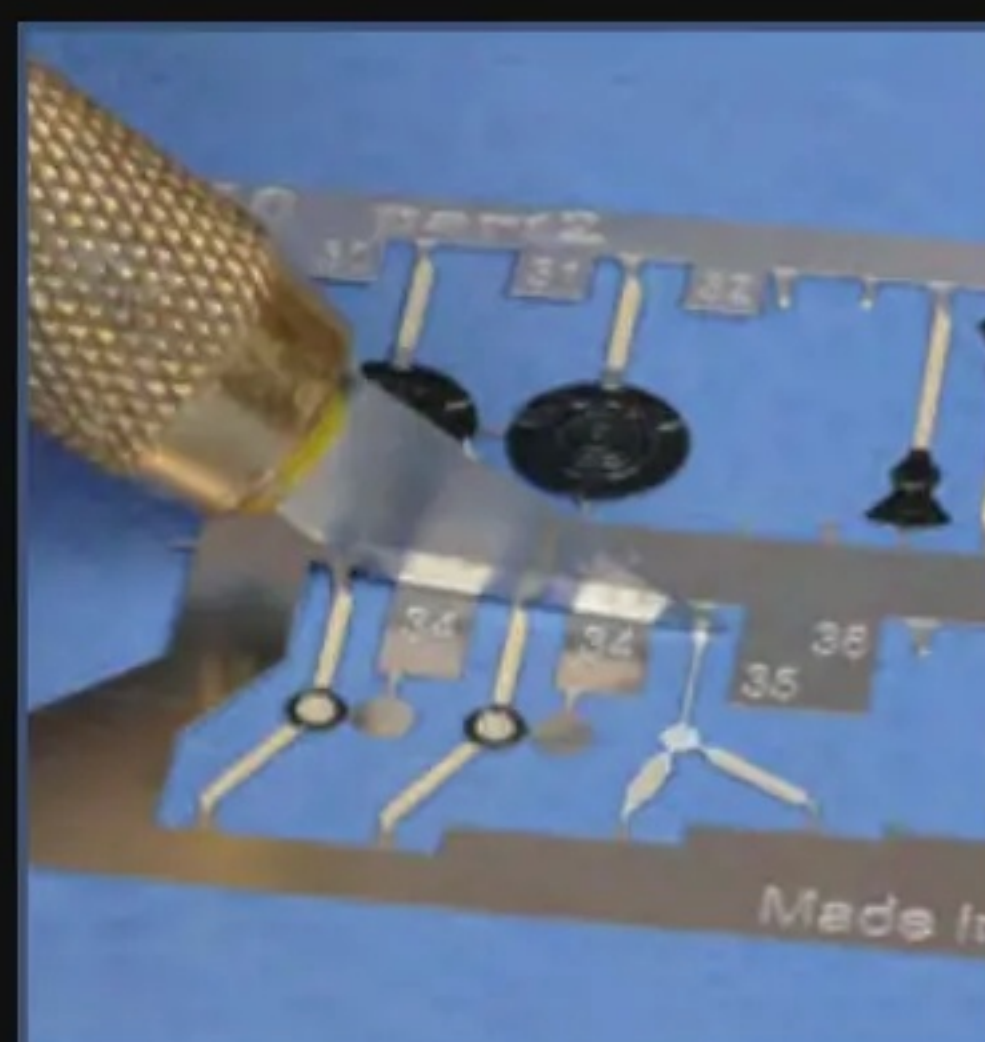
The dials are supplied on a self-adhesive vinyl sheet.



The adhesive is quite sticky. The tack was reduced by pressing the adhesive against a fingertip.



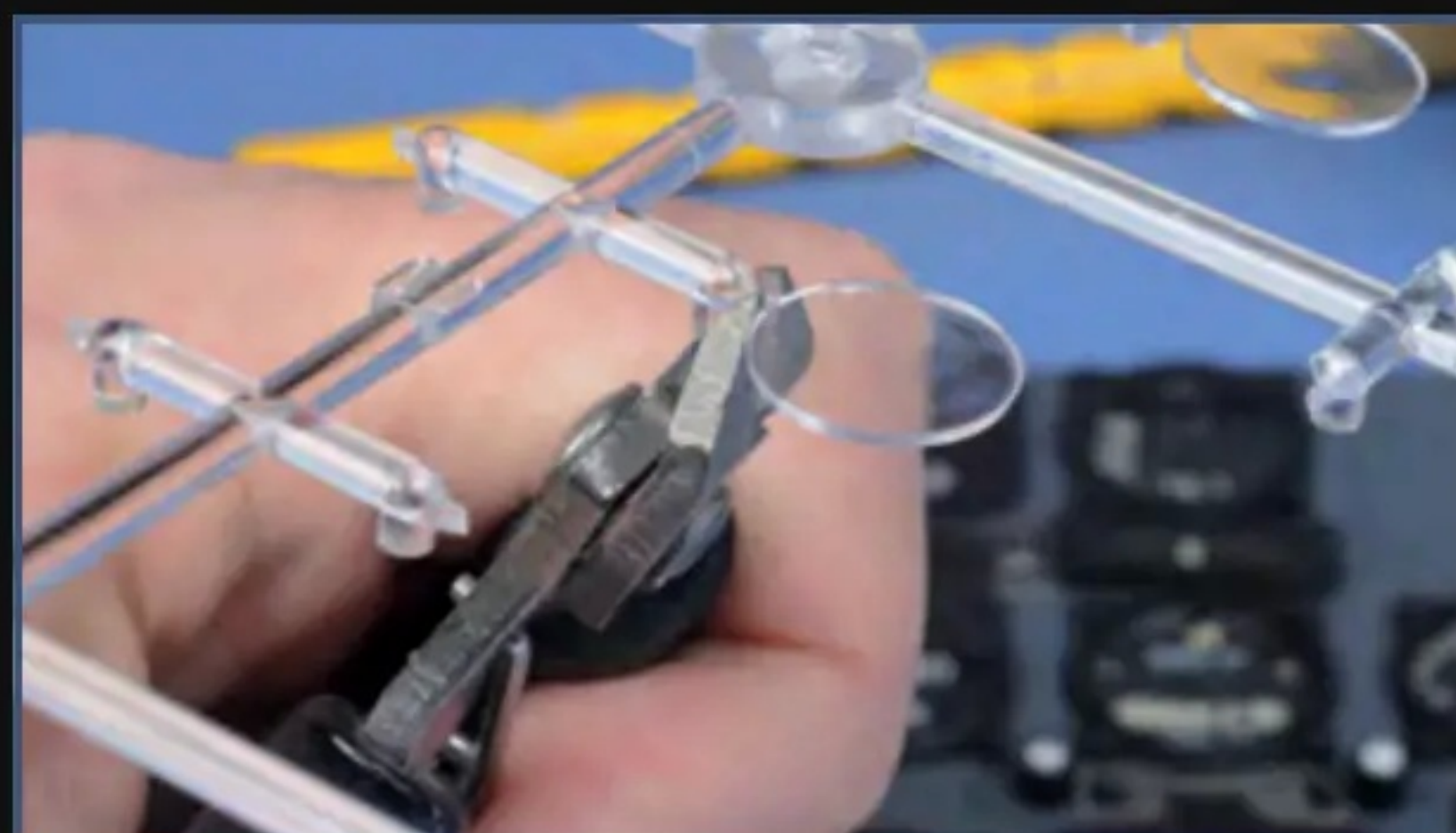
The dials are designed with a small tab at the top to assist alignment.



Individual needles, pointers and small details are supplied in photo-etched, pre-coloured metal.



These photo-etched parts were secured with a tiny dab of Krystal Kleer.



The instrument lenses are supplied in clear plastic.



The lenses are a tight press fit even without glue.



Gator's Grip acrylic glue was used to secure the instrument bezels.



Once the glue has set, the bezels ensure that the lenses do not fall out.





The panel took around six hours over two sessions to build.



The raised knobs and various placards add authenticity to this large-scale replica.

**"THERE ARE NO SPECIAL SKILL REQUIRED TO BUILD THE PANEL - JUST MAKE SURE YOU KEEP GLUE AWAY FROM THOSE CLEAR INSTRUMENT LENSES!"**



The finished panel is around 20 cm across. I bought a shadow box for around \$5.00 to display my panel. The background is a piece of green mat board.



# Scale ModelWorld 2024

**We'll squeeze it all  
in somehow...**

**Saturday 9<sup>th</sup> November ~ 10.00am to 6.00pm  
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**(will two days be enough?)**

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## Military Illustrated Modeller Issue 156 AFV Edition on sale 15th August 2024

**MARIUPOL DEFENDER**  
ICM's 1:35 Ukrainian Kozak  
APC in digital camouflage



### DEAD MAN'S CORNER, CARENTAN

A look at some of the unique artefacts on show at this famous museum in Normandy



### RENOVATION SENSATION

Jaffe Lam does a fantastic repaint of his Hobbyboss 1:35 Pz.Kpfw.I Ausf.F

## Military Illustrated Modeller Issue 157 Aircraft Edition on sale 19th September 2024



### HAVE TANK, WILL TRAVEL

Dora Wings' 1:48  
scale P-47C  
Thunderbolt by  
Brett Green



### JUNGLE WRECK

Taking a close look  
at a wrecked and  
recovered early  
P-47D Thunderbolt



### SILENT DESTRUCTION

Dragon 1:35 A4 / V-2 by Brett  
Green, Painted by Chris Wauchop



# Tailpiece

40010

## P-39 Q AIRACOBRA

1/48



Contains plastic kit, decals, masks



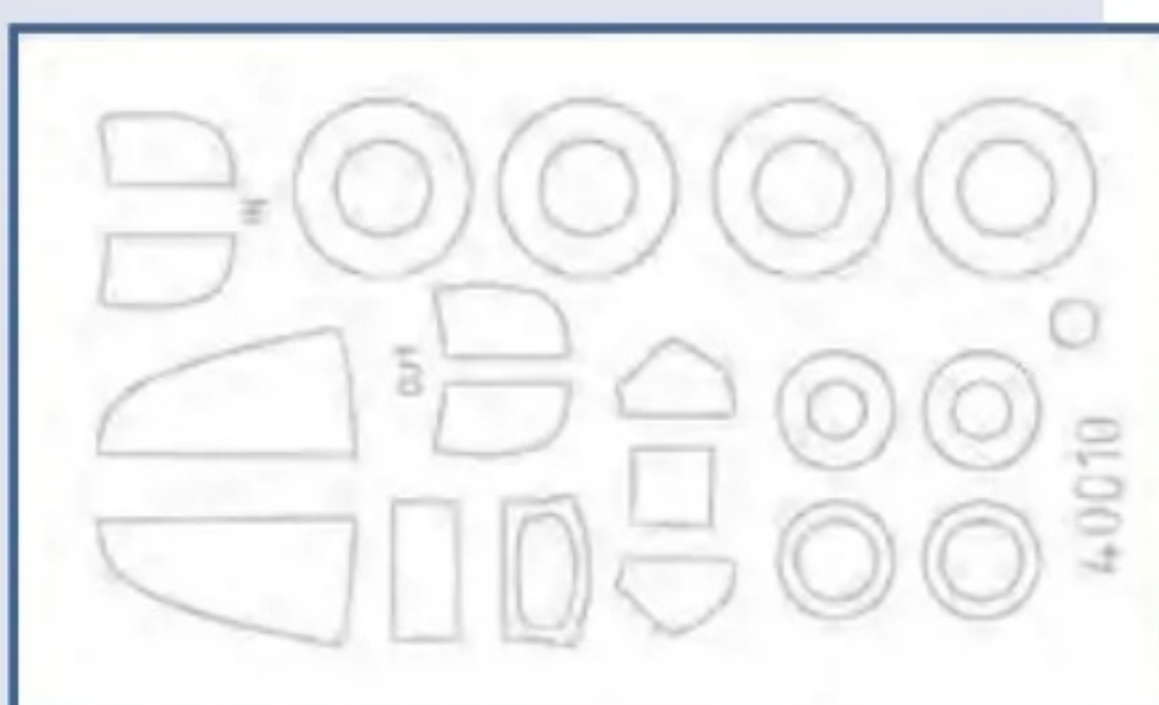
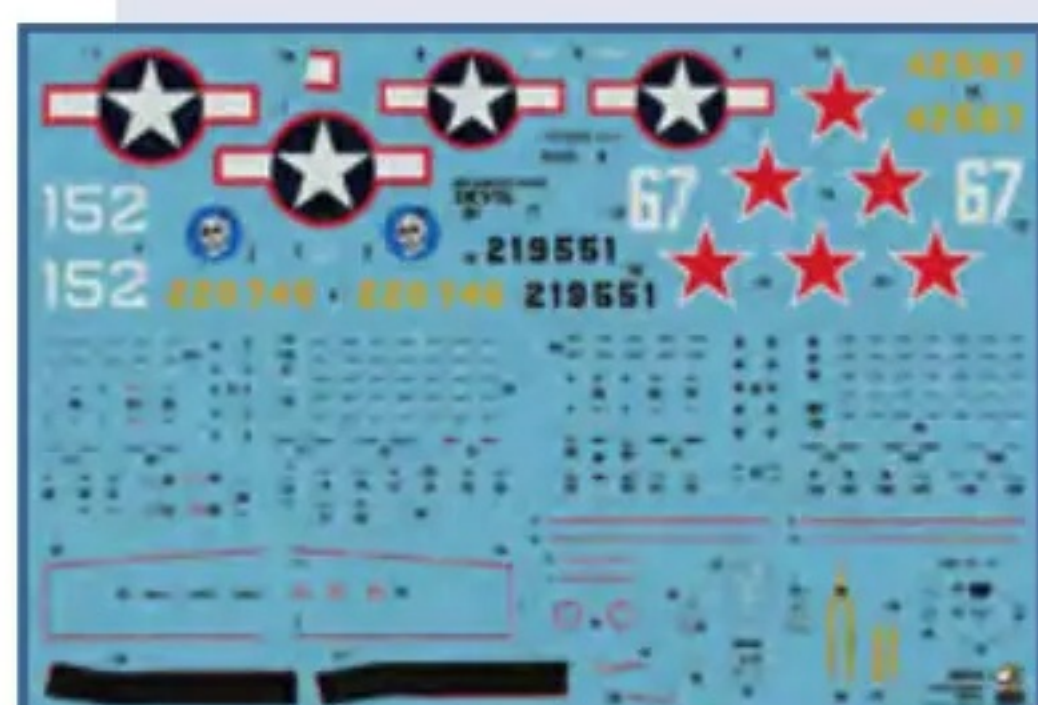
## ARMA HOBBY NEW 1:48 P-39 AIRACOBRA

Arma Hobby has an exciting new release announcement:

**W**e are pleased to announce the Bell P-39Q Airacobra aircraft model kit in 1:48 scale. This is a completely new product with new plastic sprues from Arma Hobby.

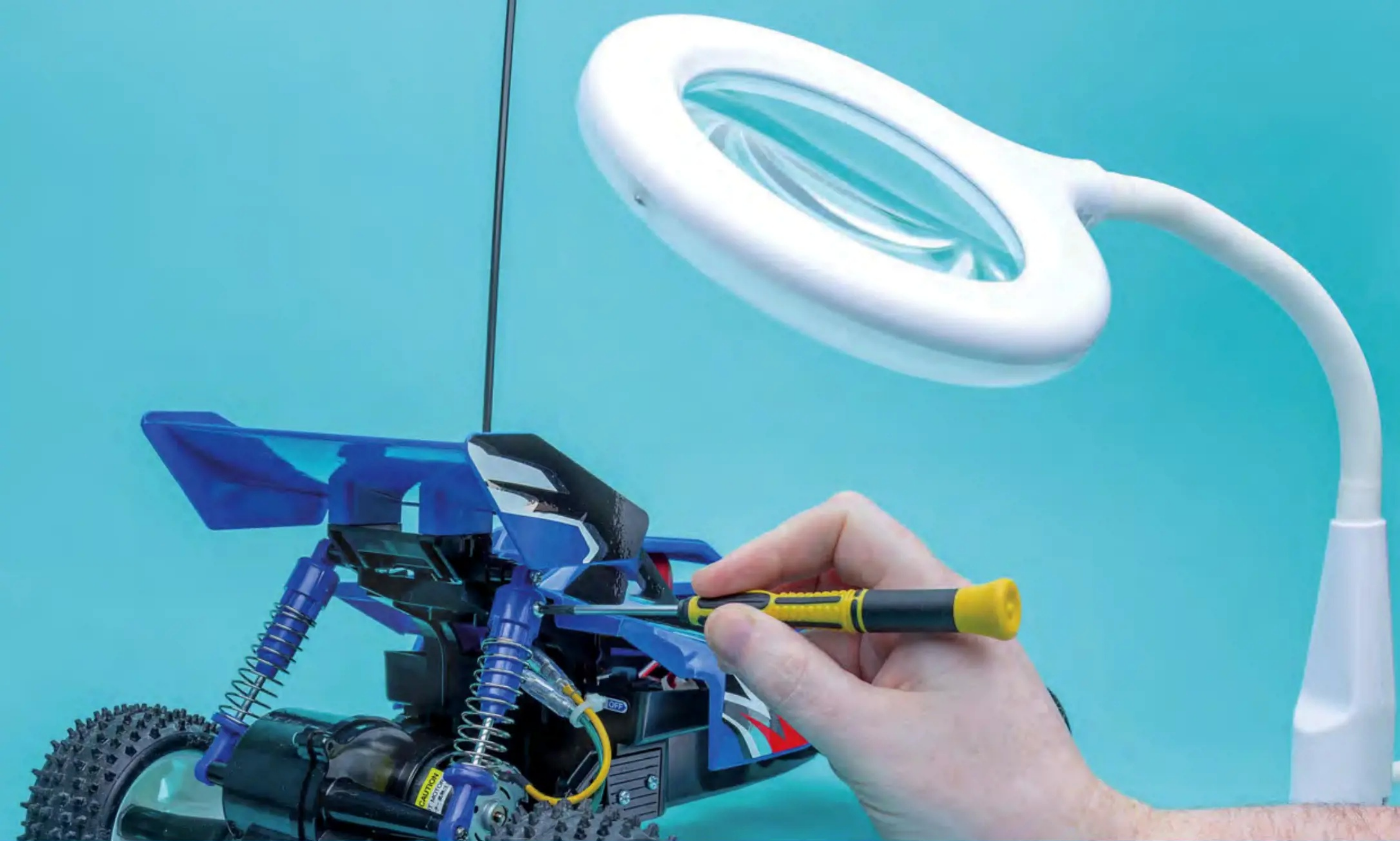
The kit we present as the first one contains decals and markings for the Q version, but the sprues allow you to build "straight from the box" also the other main versions of the aircraft: from P-39D/P-400 to P-39N and Q. The set includes three propeller and nose variants, bombs, fuel tanks, two types of nose wheel and various armament variants. The lavish cockpit interior is clearly visible through the open doors. The front wheel leg can be easily installed after painting the entire model - just one click and a drop of glue. The stability of the model is ensured by the convenient loading of steel balls (included).

In the second half of the year, we plan to release the P-51D Mustang model kit in 1:72 scale.



Thanks to Arma Hobby for the images and information [www.armahobby.com](http://www.armahobby.com)





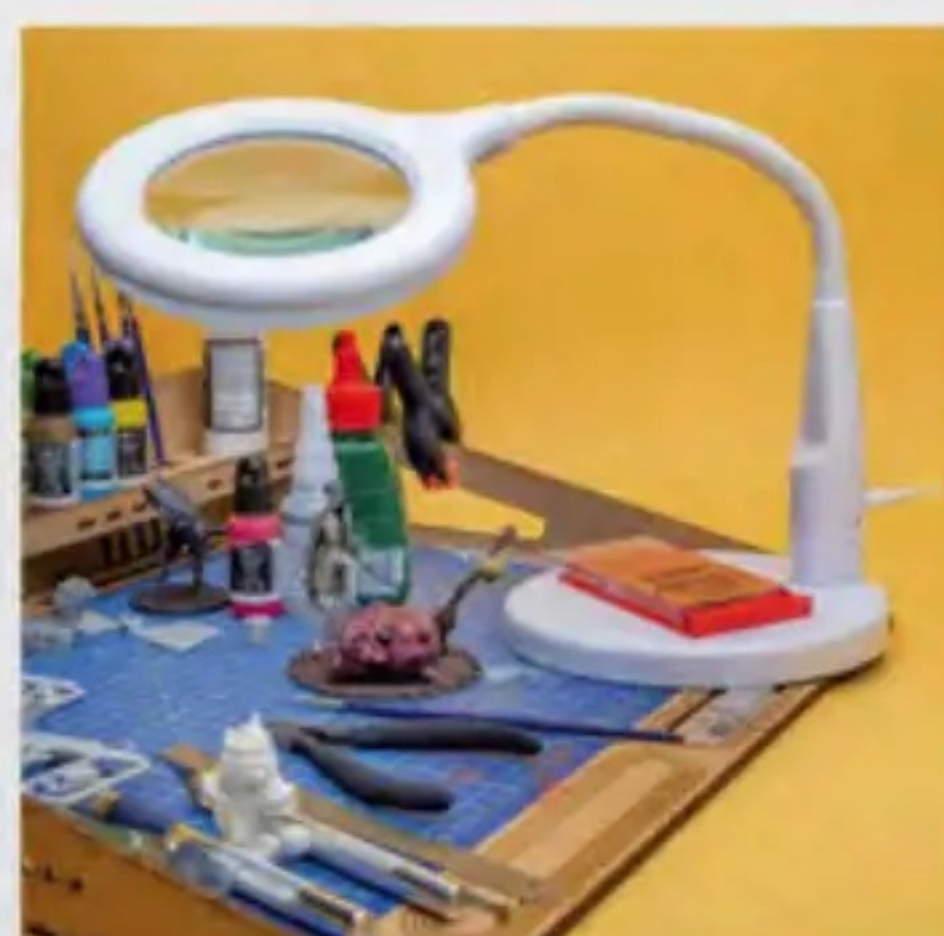
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- Easy positioning with flexi neck
- Perfect for hobby and craft

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**1/48  
MM**  
MILITARY MINIATURE SERIES

1/48 Military Miniature Series  
**British 2-Ton 4x2 Ambulance**  
(Item 32605)



1/48 Aircraft Series  
**Avro Lancaster B Mk.I/III**  
(Item 61112)

The aircraft model kit is sold separately.

# An Unsung Royal Air Force Hero

## 1/48 Military Miniature Series **British 2-Ton 4x2 Ambulance** (Item 32605)

From 1942 to the end of WWII, the British bomber aircraft Avro Lancaster flew to the mainland of Germany 107,085 times and dropped 608,612 tons of bombs, which contributed to the German surrender. On the other hand, the Royal Air Force lost over 3,000 aircraft, and many Lancasters came back with injured crew, who were often welcomed back by the British 2-Ton 4x2 Ambulance which served on Royal Air Force bases with the Medical Corps. Now, Tamiya welcomes this ambulance into the extensive 1/48 Military Miniature Series! Dioramas with 1/48 kits such as the Avro Lancaster B Mk.I/III and the Cromwell Mk.IV Cruiser Tank will expand your modeling world.

★The truck-based form is authentically captured. ★Comes with a driver figure and two marking options. ★Features succinctly and realistically depicted suspension. ★Clear parts recreate headlights and windshield.

Length: 119mm  
Width: 48mm



### Painting the British 2-Ton 4x2 Ambulance

- XF-58 Olive Green
- XF-85 Rubber Black

Tamiya Color Acrylic Mini Paints /  
Tamiya Color Enamel Paints (XF)

Make dioramas with 1/48 Military Miniature Series and 1/48 Aircraft Series models!

**1/48  
SCALE**



**Cromwell Mk.IV British Cruiser Tank Mk.VIII, A27M** (Item 32528)



**British Sherman IC Firefly** (Item 32532)



**British Tank Churchill Mk.VII Crocodile** (Item 32594)



**British Light Utility Car 10HP** (Item 32562)



**WWII British Infantry Set (European Campaign)** (Item 32526)



**Supermarine Spitfire Mk.I** (Item 61119)



**De Havilland Mosquito FB Mk.VI/NF Mk.II** (Item 61062)

★Images show assembled and painted kits.  
★Product may vary from images shown.

Check Tamiya's homepage for the latest releases! [www.tamiya.com](http://www.tamiya.com)

